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WORLDS of SCIENCE FICTION

APRIL 1955

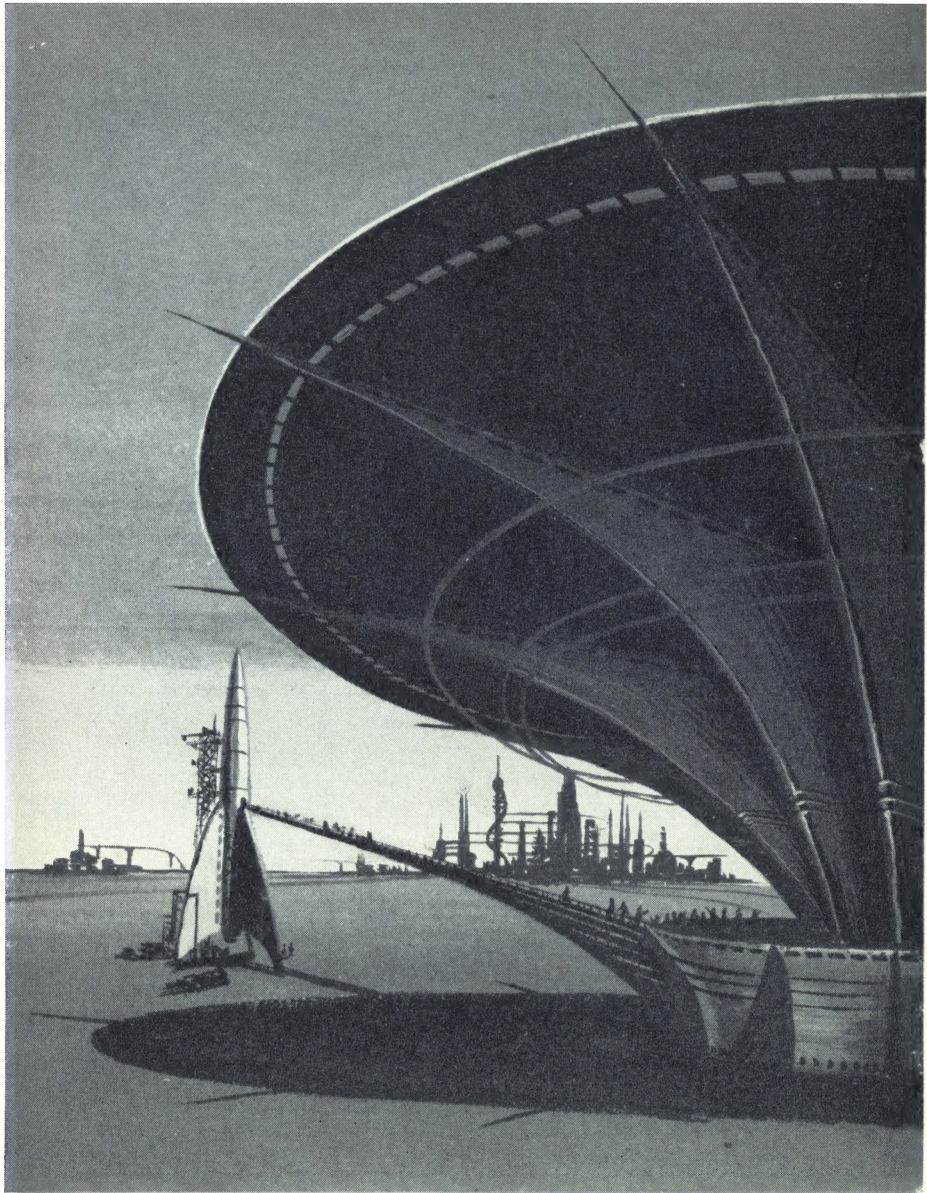
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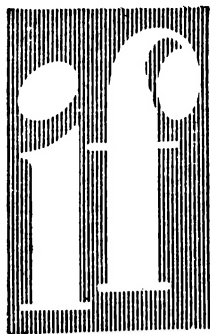
The Day the Fate of Earth Rested
On a Pair of Crooked Dice!

SHILL

By JAMES E. GUNN



AIRPORT OF THE FUTURE—Tomorrow's port for intercontinental jet ships and interplanetary space ships will be located as closely as possible to the big cities, connected by rapid electronic highways and controlled helicopter lanes. The port building will resemble a huge top and will be equipped with a long ramp which swivels around the circular base. Passengers and luggage can be speedily transferred to ships by means of fast-moving conveyors which run from the immigration offices direct to the ship.



WORLDS of SCIENCE FICTION

APRIL 1955

All Stories New and Complete

Editor: JAMES L. QUINN

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An Airport of the Future

IF is published monthly by Quinn Publishing Company, Inc. Volume 5, No. 2. Copyright 1955 by Quinn Publishing Co., Inc. Office of publication, 8 Lord Street, Buffalo, New York. Entered as Second Class Matter at Post Office, Buffalo, New York. Subscription \$3.50 for 12 issues in U.S. and Possessions; Canada \$4 for 12 issues; elsewhere \$4.50. Allow four weeks for change of address. All stories appearing in this magazine are fiction; any similarity to actual persons is coincidental. Not responsible for unsolicited artwork or manuscripts, 35c a copy. Printed in U.S.A.

EDITORIAL AND BUSINESS OFFICES, KINGSTON, NEW YORK

Next issue on sale March 10th



A CHAT WITH THE EDITOR

HUMAN NATURE being what it is, it isn't too strange that man can just about outgripe anything on legs. But a little griping now and then is all right, might even be good for you, and there are times when you have to come right out with a big one. But what gets me is the person who is forever griping about something or lamenting his plight. It can be his business or his auto or his liver; he's the unluckiest guy in the world; he's got worries like nobody else ever had.

I've done my share and maybe more, but every time I start feeling sorry for myself I try to think about stories I've read or some things I've seen. Like the two or three times I've read *Candide*, for instance. To my mind Voltaire wrote, in *Candide*, one of the most beautiful satires of all time. And when Dr. Pangloss said to *Candide*, who was having one of his lower moods, "Everything happens for the best", I also picked up a piece of personal

philosophy that's been very helpful. Another scene I liked was when *Candide* entered the tavern thinking himself the most unfortunate man in the whole wide world. His lord's castle had just been pillaged and burned, the family drawn and quartered, all females raped and disemboweled, and he had lost his beloved Cunegunde. Woe was he as he sat down at the tavern table. Yet, when each man spoke of his misfortunes, *Candide* found that he wasn't the most unfortunate man in the world after all. For each of the other travellers had experienced misfortunes worse than his own.

The point I'm trying to make is that we often aren't as unlucky as we believe. And I think we have all had personal experiences which, by comparison, make us pretty well off. Anyhow, here's one I had . . .

IT HAPPENED one day about two years ago when I was in a mean stew about business. My imagination was playing havoc with my reasoning and I wasn't eating and wasn't speaking civilly to anyone. Just what the problem was, I don't remember now. But I was the gloomiest gus you ever saw and was damning my luck all over the place and feeling extremely sorry for myself. I had to go down to New York to take care of the problem and dreaded the trip. Anyhow, I got on a bus and was on my way.

It was a lovely day, during October, I think, and the sky was a sharp sunny blue and the mountains and woods were a riot of colors and the air had a wonderful bite that was sort of intoxicating. That is, if you noticed it. I didn't.

I was too emerged in my own problems.

Anyhow, we were somewhere between New Paltz and Wallkill, which was about 25 miles of riding, when the bus stopped at a little country station—one of those non-scheduled places which resembles a deserted fruit stand. I saw vaguely that there were two people waiting, a man and an old woman. The bus was on its way again when the man sat down beside me. I wouldn't even have noticed him had he not lunged against me as he sat down. I was on the point of asking him if he was drunk or just plain rude, but something held my tongue as I got my first look at him.

He was a youth, about twenty, and shabbily dressed. He had a strange short-cropped haircut and a pasty white complexion and a looseness about his face and body that seemed out of place. I saw that the elderly woman had sat just across the aisle. She was very gray, and poorly dressed, too, but there was something about her lined face that shone and her smile was one of patience and kindness.

I must have been wishing that the person who had sat next to me had sat somewhere else and it probably showed in my face, for the old lady looked at me and said, "He's all right." She gave me a look that hoped I would understand. Then she reached over and patted him on the arm and said, "Now you be good and be quiet."

I glanced quickly back to the youth and a chill went through me as I realized that the person next to me was the first idiot I had ever seen. Suddenly I wanted to get off the bus. I edged closer to the win-

dow and tried to bury my face in a copy of the *New York Times*. Then it occurred to me that my attitude was blatantly obvious and I was hurting the feelings of the old lady, who appeared to be his mother or grandmother or an aunt. Or maybe she was used to people acting the way I was, for she gave me that same hopeful look again. I put the paper down. "Would you like to exchange seats and sit over here with him?" I asked.

The old lady smiled and shook her head. "I hope you don't mind," she explained, "but he sees nobody but me all the time and he'd like to sit next to you for awhile. Is it all right?"

I guess I must have nodded rather stupidly and muttered "sure" or "gladly" or something. What does one actually say at times like this?

A little while later she reached into one of the bags she was holding in her lap and got an apple and gave it to him. He took it with wobbling hands and then rubbed it on his frayed coat and looked at it and made an inarticulate sound that went with his bobbing head and watery blank eyes. He seemed very happy about the way he had shined it. Abruptly he thrust it at me. He said something that sounded like "bite" and I didn't know what to say or do.

My smile must have been rather tight as I said, "Thank you—I—"

The old lady came to my rescue. "That young man doesn't want to take your apple," she told him. "Now you be good. You eat it."

That seemed to satisfy him.

During the next twenty or thirty

(Continued on page 120)

The Galactical Examiner condemned Earth to isolation because one man had cheated with the dice. But Fader Martin had good cause to cheat. The universe was at stake . . .

S H I L L

HE WAS a middling tall, aging man with a waist that had begun to spread and a rough-hewn philosopher's face bleached by ten-thousand sunless days. His name was Fader Martin.

People called him the Banker, but there was a better name for him. Shill.

He had a voice inside his head.

He stood by the elevator door in the decaying, mid-Twentieth Century grandeur of the Desert Inn corridor and waited for the spinning silver dollar to come down. As it fell, Fader caught it deftly out of the air and slapped it over on his wrist.

"It comes up heads," he said. He unveiled the cartwheel. "Tails," he muttered. Then a frown creased his forehead.



Illustrated by Ed Emsch

Who's meddling?

"Fader," said the voice inside his head, "the plan's hopeless. Who can win with an exposed hand?"

Too late. Even if it weren't, we've been over and over the thing often enough to know that nothing else has a prayer. We have to lay our cards on the table. We can't keep him from spotting the one-eyed jack, but we can keep shuffling them around so that he has to guess where it is.

"French monte?"

Shell game. Watch the pea, ladies and gentlemen! It's never out of sight. Which shell is it under? Guess the right shell and win the grand prize! The one in the middle? I'm sorry, sir— Fader took a deep, harsh breath. Only it makes these old hands shake sometimes

when they remember that the grand prize is the universe. . .

The elevator doors split apart and asked him in.

"Good morning, Mr. Martin," said the eager young man with the glad smile. "How's the Banker this morning?"

"Let me put it this way," Fader said tiredly, "if I could burn the dice now and start out with a fresh roll, there'd be some hot dice right quick."

"Hope there's nothing wrong, Mr. Martin," the boy said with quick concern. "I got a sawbuck riding on your nose."

Fader's smile was a little grim. "Nothing that a little rest wouldn't cure. Fader's getting old and tired, boy. He can't stay on top forever."

"Oh, I've got a system—" the boy began confidently.

Fader held up a pale, thick-fingered hand. "Don't tell me. You double up on favorites."

"How'd you know?" the boy asked, wide-eyed.

"In my lifetime," Fader said, leaning back against the rear wall of the car, "I've seen every system ever invented. They all have two things in common: 1) they require a large starting capital, and 2) they always go broke. If you lose, you double your bet on the next favorite until you finally get a winner, right?"

"Yes, sir."

"At Gulfstream Park, Florida, a little over a hundred years ago, twenty-one favorites lost in a row. If you had bet two bucks on the first race and doubled your bet for each one thereafter, your bet on the twenty-first race would have been \$16,016,896. Just to win a

two-dollar bet."

"But if a man can't play a system," the boy objected, "how is he going to win?"

"Is he to win at all?" Fader said slowly. "That is the question."

The boy sighed and punched the button. "Take a chance on a turkey, sir?"

Fader looked down at the punchboard held close to his nose. "Thanksgiving must be six months away," he said wryly.

"Can't start too early."

The boy was an atavism. In a world of salesmen he would have been wealthy and successful, respected and powerful. Here his talents were useless, his existence marginal; he could only peer in at the people around whom this world revolved.

But punchboards and turkeys are an elevator boy's perennial prerogative. "Sure," Fader said. He punched out a cylinder of paper and reached for his pocket.

"Just ten cents, sir. This is your lucky day."

The doors parted. In front of them was the wide, cool, deserted lobby.

Fader smiled ruefully. "I hope so." He flipped a dime at the boy and started out of the car.

"Could you give me a tip, sir?" the boy asked brightly.

Fader swung around. "You've got the dime," he said impatiently. "Flip it!"

With puzzled eyes, the boy spun the coin high in the air.

"Call it!" Fader ordered.

"Heads," said the boy. He caught the coin and turned it over on his wrist. "It's tails," he said, looking down.

"That's your answer. Here's your tip—don't gamble! Anyone with no more psi than you hasn't got a chance."

"I know I could be a winner, Mr. Martin," the boy pleaded. "All I need is a little capital. You can't get that at a few bucks a day. If you'd just give me one—"

Fader sighed. "Earthbound in the fifth," he said.

"Yes, sir!" the boy exclaimed. In his eyes was a reflection of the gamblers' grail—the sure thing.

Fader turned away, a little sad. It was a good world, this red-and-black jungle, but there are misfits in even the best of worlds.

Even Heaven had Lucifer.

THE LOBBY was clean, polished, and wide. Desks and shops were exposed and unromantic by morning sunlight. Only the tobacco-and-newscounter was staffed.

The girl behind the counter was bright-eyed, brown-haired, and well-scrubbed. The cleanness of her beauty brought a smile to Fader's lips. "Just the *Racing Form*, Jan." He tossed thirty-five cents into the felt-lined box in front of her. "You don't look like a player. How come you're working?"

"I used to be. Pretty good, too. But now I've got a young man—"

"Syndicate?" Fader asked.

Color rose into her cheeks like a gay flag. "More like a partner. He's asked me to marry him."

"A proper tribute," Fader commented. The forms changed but people remained the same. Women had always worked to give their men a start. They always would.

"And how's he doing?"

"Even better than we'd hoped."

"No doubt I'll have to reckon with him some time—if I last that long."

She shook her head with finality. "Not with him, Fader. When he wins fifty million, we'll quit. That's all decided."

"Then I can wish him luck without reservation," Fader said, smiling. But as he turned away with the thick tabloid folded in his hand, he was thinking, *If the boy's good, he'll never quit. The game gets in a man's blood. I wouldn't want it any other way.*

Jan was talking to him, he realized suddenly. He had fallen into a habit lately of these internal dialogues. Maybe it was because of this voice in his head. More likely it was age. He was getting old, he told himself ruefully. He had been on top too long; it was time he retired.

He wouldn't, though. Not while he had a chip left. And not while he had a stake left in this other game—the blue-chip game.

"Roll for it, Fader?" the girl repeated. "Double or nothing?" She shook the imitation-leather cup. It clicked enticingly.

Politely but firmly, Fader refused. "I'll need all my luck before the day is over."

"Cowboy?" she asked anxiously.

"Don't you read your own papers?" he asked, lifting a thick, dark eyebrow. "There's always another one. But this is different. The Examiner's here—"

Her eyes opened like fringed gentians before the sun. "I didn't know. Last time was fifty years ago, wasn't it?"

"To the day," Fader agreed. "Very punctual people."

"He's come to see if we can pass?"

"That, I gather, is the general idea."

The girl frowned and caught her red, full lower lip between her teeth. In the cup sitting on the green, the dice chattered.

"What's the matter?" Fader asked.

"I don't know." She shrugged the mood away. "It's just—Oh—the best of luck. With both your problems. We like our Banker, you see. We don't want to have to break in another one. And we'd like to pass the examination if—if—"

Fader nodded. "If it doesn't involve any effort. Thanks for the good wishes. I'll need all the luck I can get."

He walked through the broad archway into the casino. He couldn't avoid it if he wanted to. Traffic to and from rooms, restaurants, bars, shops, swimming pools, sun decks, golf links was routed past banks of slot machines and clusters of gaming tables. Facilities for trying a man's luck were always close at hand.

The slot machines were in banks. Die-hards stood before them in tireless, trancelike concentration looking even more mechanical than the machines they fed so rhythmically.

Fader looked down at his hand. A silver dollar was in the palm. He shrugged: such was the force of habit. It slipped into a waiting coin slot with an ease that was almost alive. Fader heard it hit bottom and pulled the handle as he passed.

The bandit was old-fashioned.

Most of them were. They did not differ materially from those in which his great-grandmother had squandered the week's grocery money. Gamblers are notoriously conservative; they want slot machines to look like coin traps instead of automatic venders.

Chung-chung-chung! *Bar! Bar! Bar!* Cartwheels cascaded into the pay-off cup. Eighty of them made quite a din.

"Another jackpot!" An apron girl hurried up to him smiling happily.

"Put the cartwheels in a sack, eh? I'll take them with me."

The sack was heavy, but Fader carried it to the door. The inevitable beggar was sitting there. This one was legless. He blinked blindly into the sunshine, his battered hat upside down between his legs to receive donations.

He was there from choice, not necessity. In a completely straightforward sense, he was an employee of the house—a convenience provided for the patrons—and he worked his shift exactly like the croupiers and the apron girls.

Fader had been lucky. He wanted to stay lucky. Gently he slipped the sack of coins into the hat. The old man turned his face up. "May the gods of chance smile on you," he whispered. The money would quickly disappear into the bandit thoughtfully installed at the beggar's side. It didn't matter.

Fader had bought back his luck.

Fader took three steps into the sunshine before he realized that the beggar was one of those ancient daredevils who had risked their lives in a no-limit game.

What they had done, no one could ever forget. After them, there was no more need to buck the game.

He was, perhaps, one of the lucky ones. He had come flaming down from that wall in the sky, but he had escaped alive. Destiny had claimed only his legs and his eyes.

Fader remembered a tape he had heard once. He had listened to it with his hands sweaty and his body taut, as if he could help the ship through the invisible wall by an effort of will. That was foolish. The tape was more than fifty years old:

"Twenty-four thousand miles," the voice had said. It had been flat and unemotional. "No trouble yet. Power still on. Still accelerating. Going to cut off soon and coast. Kennedy thinks it may make a difference. We'll see. Out now."

But the tape went on, and the noises went on in the cramped third stage of the rocket. Behind everything was the rocket-thunder. Closer was breathing, heavy in the pickup. A switch clicked. The thunder cut off. It was gone. In its absence the other noises were much too loud.

"Power off, now," said the nameless man. "Will try to coast through. Twenty-four thousand nine hundred. Should be soon now." His voice climbed a little, betrayed emotion for the first time. "Feel weightless, but I don't mind that. Nine hundred fifty. Sixty. Hope you're right, Kennedy. Ninety. Here we go. Hold your hats, boys—"

Tense, then distorted with surprise and fear: "Skin temp climbing. Melting! Instruments. Dash-

board. All at once. No dice, boys. Going to try to jettison before it gets to me. Hope the cartridge works. Hope—"

After that there was nothing but background crackling on the tape and then nothing at all.

Fader sat on the bench looking out over the irrigated velvety greenness of the fairways. *They look like a vast crap table*, he thought. His gaze climbed above the horizon toward the sky. Its blueness was bright and unclouded and pure. No one would suspect that it was a wall, just as definite as brick and millions of times stronger.

Within its limits Earth was contained, complete in itself, and with it the race that had mastered it and sought to use it as a stepping stone to the stars. The long climb upward from the puddles and pools and seas was done. The Big Pit Boss had burned the dice as they passed the box. "The sky's the limit," he'd said. It was. Literally.

Fader imagined ghostly cubes tumbling over the vast felt-lined table of Earth. Humanity had crapped out.

The eternal frontier had been an illusion. On the day, 100 years ago, man discovered he was no longer alone, he learned that he was isolated. Man, the Gambler, had found the Big Game in town, and the policeman had told him to play solitaire in his own room.

It was more than any gambler could endure.

Man had been ready for milenia. Let the aliens come—he was psychologically prepared for the meeting.

The most primitive tribe would

have received them as gods. The most sophisticated civilizations would have accepted them as fellow beings.

If life on Earth were not an anomaly, then it existed throughout the universe. Even if habitable planets were as scarce as one to every 200,000 suns, there would still be millions of them. That is stellar mathematics.

Somewhere among them, then, should be at least one race technologically more advanced than man, and it would be long odds indeed if there weren't many.

So went the reasoning, when reason was in fashion.

In all the ages man had been ready. But he had not been ready for this. He had not been ready for the impossibly small ship that appeared suddenly above White Sands. He had not been ready for the emergence of a single manlike being or for his words, in impeccable English, "Earth is quarantined. Man cannot be accepted into the interstellar society of races until he meets certain standards of public and private behavior. Until then a wall will stand between Man and outer space. Do not attempt to break through—it is deadly. Accept your lot. Perfect yourself."

It was surprising but not unreasonable. If it was anything, it was much too reasonable.

The philosophy of Western Civilization contained a vital premise: Man and his society were not perfect. Granted the premises of the alien—1) the existence of a Galactic Union (evidence: the alien himself), and 2) the ability to carry out his statements (evidence: the ship)—then there was

only one thing to do: perfect Man and his society.

But what is obvious is not always possible.

In one hand the alien held threats. The other held gifts.

He offered assistance in helping humanity meet minimum Galactic standards. When that was refused—for humanity does not take kindly to tutors—he offered a convenient, fantastically efficient converter for solar energy and an energy storage device which escaped the fantastic only by comparison.

Humanity accepted. There is such a thing as false pride.

The alien left as he had come. He would return, he said, for periodic examinations of humanity's progress.

Humanity frowned into the sky and disbelieved—in spite of tapes, films, the alien artifacts, the converter and the battery. Man besieged the heavens with missiles, manned and unmanned.

And he saw them fall, flaming like Lucifer into Hell.

The wall was impassable and unbreakable.

Man had met the alien, and the quality in which he had so prided himself—the reasoning mind which could comprehend and conquer the universe—had been brought to perfection by this race long ago. Man could never hope to catch up.

A place becomes a prison when leaving it is forbidden. Earth was now a prison, and it was suddenly too small for Man. And the only route to a shorter sentence was good behavior.

But perfect himself? Man wasn't built like that.

He was competitive, and he had

suddenly been denied the right to compete. The old competitions were pointless now, and it was obvious that the real fight was fixed. It was no surprise that Man had turned to his old mock struggles—the games of chance—and made all Earth a vast casino.

In one sense it was a safety valve. The Examiner might understand. Whether he would sympathize and approve was another matter.

IN the back pages of the Racing Form was a large ad printed like a news item. It announced, proudly:

**COWBOY BREAKS BANK
AT GOLDEN NUGGET**

Fader glanced down the column. John Head, better known as Praying John, had taken the Golden Nugget for more than 16 million dollars last night, causing a temporary suspension of play while the pit boss secured more funds. Head had placed a ten-dollar chip on Number 13 and let it ride. The number 13 had received the little ball five times in a row.

The ad, of course, had been paid for by the Golden Nugget. Praying John's success was a fabulous stroke of luck for the casino, and they would be derelict if they did not publicize it to the hilt.

The Nugget's wheel, obviously, was the most generous in Las Vegas and, therefore, in the world. Its patrons were the luckiest. Before those implications were forgotten, the casino would win back many times its original loss.

Praying John was the best skill the Nugget ever had.

SHILL

He was also the most dangerous highroller current.

The back pages of the Racing Form contained a few news items of a general nature. As the world's most widely circulated newspaper (*Editions in Europe, Asia, Africa, South America, and Australia*) the *Daily Racing Form* considered the coverage of non-sporting news a public duty.

Fader was interested in only one short item. Under a Las Vegas dateline was the following information:

Registering at the El Cortez Hotel in downtown Las Vegas this afternoon was a manlike creature who signed the register in meaningless hieroglyphics. Under questioning by the clerk, he asserted that he was the Examiner from the Galactic Union.

The government, the creature is reported to have said, was already aware of his presence. No official could be reached to confirm this.

It has been learned, however, that the White Sands spaceport ruins have been closed to the public, and a hurry-up call summoned government stickmen to turn back would-be-kibitzers. . .

Fader smiled. If the inquiring reporter had seen the impossibly tiny ship among the rusty towers of the abandoned multiple-stage rockets, he would have been even more puzzled. Technicians requisitioned from a nearby pinball factory had offered odds that the thing could never get off the ground.

It was a sucker bet, but it expressed their feelings perfectly.

The sound of childish voices broke Fader's reverie.

"Yeanh! Yeanh!" came the nasal chant. "Welsher! Welsher!"

"We weren't neither playing for keeps," said a voice full of tears. "We weren't! We weren't!"

The circle was inscribed in a sandy path that bisected the greenness. The morning sun made jewels of the scattered, marbles inside the circle, but they were forgotten. The boys had formed an ugly half-circle, heavy sacks swinging in their hands. Its center was a boy whose back was toward Fader.

The boys looked up in surprise when Fader said, "Now what's the trouble?"

"Who wants to know?" snapped one of them, tossing back an unruly lock of hair.

Beside him a friend nudged vigorously with his elbow and said in a stage whisper, "Shut up, Stupid! It's Fader."

"You see, sir," said an earnest dark-haired boy, "we got up a little game, sir, and Kenny here wanted to play, but when we won he wouldn't pay."

Fader turned inquiringly toward the golden-haired boy named Kenny. His tear-stained face was angelic with beauty and trust, but he clutched a slim sack of marbles tightly to his chest. His voice was a clear soprano. "Nobody said we were playing for keeps, sir."

"Come over here a moment," Fader said gently, his heart leaden, and walked slowly to the bench, out of hearing of the others. "Kenny," he said, putting one hand on the boy's shoulder as he sat down, "there are some things you

can't learn too early. One of them is that life is for keeps."

"But they didn't tell me, sir—"

And he looked not so much like a fallen angel, as one who has let the shadow of a mortal fall upon him.

"There comes a time—always—for everyone," Fader said slowly, "when he discovers the real nature of the world. Call it a moment of discovery, of illumination, of being born into the knowledge of good and evil. It is a sword with a double edge. It also teaches a person what he himself is like. You know I wouldn't tout you wrong, don't you?"

"Yes, sir," the boy said, his eyes steady.

"Afterwards," Fader went on, "the person realizes that the world is actually independent of his wishes, that it is he who must shape himself to fit it, and that his acceptance is conditional. But if a person wants acceptance, he must reshape himself to the world's standards. Right?"

"Yes, sir," the boy said.

"There are two kinds of people in the world," Fader said quietly. "There are players and there are kibitzers. The players are competitors. They throw themselves into the game, learn the rules, abide by them, and try to win—which is to get back some part of the omnipotence they have lost. The kibitzers are content to stand by and watch and never to be a part of the game at all. Understand?"

"Yes, sir."

"There're two kinds of people, Kenny, and there's nothing wrong with either one of them. But the secret of happiness lies in discover-

ing which kind you are and sticking to it. If you're a player, play by the rules and play hard, accept your winnings, pay your losses, and don't complain. Chance has no favorites. If you're going to kibitz, kibitz and savor the pleasures of watching. Don't be half one, half the other, and all miserable."

"I understand, sir," Kenny said manfully, his chin high, and he handed Fader the slim sack of marbles. "I won't play any more; there's nothing I want that much." He turned and ran quickly over the green turf toward the hotel.

Fader watched him out of sight, a brooding frown darkening his face. It was a jungle world, certainly, as it had always been, and a jungle is no place for angels. That was a pity, but there was no help for it.

He swung around to the silent group of players and held out the sack to the boy with the unruly lock of hair. This one Fader could understand. Here, at least, was the stuff of which players were made. Some fifty years ago Fader himself might have looked much like that.

The boy took the sack with a quick, grubby hand.

"You won these at a game of skill," Fader said evenly. "That isn't playing the game. A game of skill is only another way of cheating. Don't kid yourselves that you were gambling. Gambling is ruled by chance."

But the winner, as Fader turned away, was unrepentant.

Fader chuckled and shook his head as he climbed into the helijet summoned by the doorman's built-in radio. "The El Cortez," he said into the where-box.

SHILL

The rotors lifted him upward and then cut out as the rear jets kicked the plane toward the city of Las Vegas.

As the city sprawling in the sands rushed toward him, Fader had time to study its giant, three-sided tote board and the names and odds circling eternally, light against blackness, for every citizen to see and put down his bet. The odds at the moment concerned the big, perpetual battle for the Bank:

FADER MARTIN	\$11,503,762,016	2-1
MONTE JONES	5,222,834,125	15-1
LUCKY KNIGHT	3,219,107,009	20-1
JOHN HEAD	1,836,712,138	9-1

Although Jones and Knight were several lengths in front of Praying John, it was obvious to Fader—as it was to the general bettor—that they had lost their luck and their nerve. They hadn't been a threat for days.

Even as he watched, the totals of Jones and Knight dwindled by a few thousand dollars and that of Head jumped by more than a million. His odds were lowered to 15-2.

Fader took a deep breath. Damn all highrollers at a time like this!

The helijet zoomed toward the landing platform far below on the El Cortez roof. Fader booked a small bet with himself that the rotors would not kick on.

THE EXAMINER reminded Fader of Kenny, the boy with the curly golden hair. Given surpassing intelligence, character integration, and the knowledge of great power, the boy could become a twin to this creature.

The Examiner was a superior

being. There was no denying it. Recognition was instinctive.

Fader battled an inferiority complex that threatened momentarily to overwhelm him.

The Examiner was angelic, as Michael was angelic—extraordinarily tall and slim with a beauty that was golden and calm. He had an aura compounded of purity, intelligence, and power; it was almost physical. Fader blinked several times before he convinced himself that it was an illusion.

Like Michael, the Examiner held the secret of the mighty *word* by which God created Heaven and Earth. Like Michael, he stood guard with a flaming sword before the gates of Paradise from which mankind had been thrust and could not enter again.

Beside him Fader felt short, animal, vulgar, stupid, like the primeval monkey chattering in the trees at the straight, silent proto-man moving along the jungle trails below.

Although the Examiner was dressed much like Fader—colorful, synthetic-fibered slacks and shirt, cuffed tightly at wrist and ankle, the knees padded—he outshone the clothes. By contrast, like the spacious splendor of the suite, they seemed poor, tawdry, shabby things.

This was the being who had the power to say, "Your time of trial is over. The wall is down; the flaming sword is lowered. You are free to come and go as you wish."

What the Examiner said was, "You represent the government?" His voice was deep and melodious.

Fader shook himself and nodded. "I can speak for the House. They

call me the Banker."

"Conditions have changed since my last visit."

Fader couldn't decide whether it was an idle comment or a statement portentous with meaning. "You were the one who came last time—fifty years ago?"

"Yes. My race outlives yours considerably."

"Naturally?"

"I'm unable to answer the question," the Examiner said regretfully. "You must recognize that information cannot be divulged which might aid Earth in evading the Union's ruling. Even such a simple statement as you request might have unfortunate consequences. I am here as an Examiner. Let it suffice that a portion of my lifetime has been devoted to the problem that Earth represents."

"Our regrets," Fader said drily.

"They aren't necessary. This is a service to my society which I—like any citizen—am happy to perform."

"You wouldn't give us the secret of longevity, then, even if you had it?"

"We have given you all we can. Even if we could give it to you—and it might solve many of your problems—it would be unwise while you cannot control your own numbers."

"We need longevity to find the answers to our problems," Fader summed up, "but we must have the answers before you will give us longevity?"

"Granted the premises, the conclusion would be correct. But you called the government 'the House' and yourself 'the Banker.' Those terms were not current when I was

here last."

Fader summarized the long story in a few sentences. The gifts of the Galactic Union had made this society feasible.

With an unlimited, convenient source of energy, Earth became a world in which no one had to work. But for the majority of mankind there had to be a reason for existence. That reason was gambling. There was nothing to be won? True. It was an artificial competition? True. But that was Man's nature; he had to compete, somehow, someway. And in the final analysis it was no more artificial than most competitions.

The society worked; that was the least that could be said for it. Because the symbols for which humanity gambled—the matches, the chips, the dollars—were limited, men had to work to get them. Thus certain essential duties were performed.

No one had to gamble, but if he chose to he had to work for his starting capital. The money with which he was paid had no intrinsic value; it could buy nothing except what people chose to sell for it—which is true, of course, of any medium of exchange.

What could not be sold were the necessities of life. No one would buy, for people only buy what they do not have.

As valid reasons for government vanished, elective offices dwindled. When a few appointive positions became necessary—stickmen, who collected revenue, and judges—the man with the most chips was asked to appoint them. He became, in a practical sense, the head of the government, the Banker. The govern-

SHILL

ment became the House because it was a partner in every gambling enterprise.

"They call me the Banker," Fader said wryly, "but there's a better name for me. Shill."

"A shill," Fader explained, "is a houseman who poses as a player to stimulate the play. In the sense that I perform no useful function except as a figurehead who induces other men to compete by his example, I shill for this society. I suppose there's a little bit of shill in every public figure. I'm not ashamed of it; a good shill is a rare thing."

"I should think," the Examiner pointed out, "that it would depend on what he shilled for. Our reasons for quarantining Earth remain valid. You have not evolved a sound society. You have not outgrown idle competition. The goals you seek are still false. You are still unfit for the society of civilized beings."

"I hope that you haven't prejudged us."

"I point out only that we found you—technologically precocious and psychologically retarded—about to burst out among us. For your own sake, we placed a quarantine so that you might develop naturally—"

"How can we develop naturally when a flaming wall above us proclaims that we are prisoners dependent for our well-being and even for our continued existence upon the mercy and good will of unseen aliens?"

"It is a symptom of moral savagery," the Examiner said gently, "that our intentions and motives should be suspect. We have gained

nothing from this meeting of races; we have no hopes of gaining anything except, perhaps, the possibility of free association with another civilized race. Our theoreticians have said that you are not beyond redemption; they said you needed time. Your environment had developed a deep-grained competitive spirit which only time and an amelioration of conditions might hope to change. We gave you leisure. . ."

Fader frowned, wondering, as he had wondered before, if the aliens were telepathic.

"A blank wall," said the voice inside his head. "*Like trying to read the mind of a fish.*"

Completely non-telepathic then? Or able to blank himself out?

"Who knows? My guess: even if he's telepathic, he can't read an alien. I can't do anything with him."

Might as well forget it, then. If he can, there's no help for it—we're up the creek without a paddle.

"I ask you," Fader said to the Examiner, "whether you did not give us gifts out of a feeling of guilt."

The Examiner's shrug was as natural as if he had been shrugging all his life. "We are not insulated from error or immune to emotion. We may have been prompted by a small desire to make amends. But what did you do with the leisure we gave? You set up new goals even more ephemeral, sought by methods even more disproportionate. Can you defend such a world, so unequal, so pointless?"

"Ethically, morally, economically I can defend it—any way you wish.

Pointless? You miss the point. Of course we have inequality—how can any society avoid it?—But note that this is not the inequality of birth, of intelligence, of skill, or of anything else permanent and unchanging. This is the fleeting, impartial inequality of chance. If it raises a man high one day, it may drop him below the lowest tomorrow. And those who are broke this week may rule next week. Everyone is equal in the eyes of chance."

"The equality is spurious which takes no account of merit."

"Merit?" Fader asked in surprise. "What intrinsic merit do we claim? We are born, unwilling into this world; we exist in it only because it seems the lesser of evils. We have no right, sir, in ourselves, to claim anything of destiny except the impartial distribution of her temporary favors. Our only proper demand is that the game be honest."

"Every society has a duty," the Examiner said soberly. "That duty is to reward and so promote the best conduct—that conduct which is best for the race, for the society, and for the individual—in that order. The great flaw in your race and your society was that it inverted this normal order. I have seen no evidence of change."

"Who knows?" Fader said softly. "We aren't worried about the enforcing of arbitrary rules on everyone impartially. We ask only that a man restrict his actions so that they do not threaten or endanger the person, property, or happiness of anyone else. Furthermore, not having been consulted on his forcible induction into this world, he may choose to play or not.

If he chooses to play, we ask only that he obey the rules of the game and leave the rest to chance.

"But you came to look not to listen."

THEY PASSED down the hall the tall, lean man, his face carved by ten thousand fevered nights, and the taller, leaner, more subtly jointed being from another world who had come to sit in judgment upon this one. As they entered the self-service elevator, Fader noticed that the alien hummed. As they stepped out into the wide lobby and walked into the sun-bright street, it stopped.

Fader knew what the technicians would tell him. They would say that it was a gravity neutralizer or generator, or an energy shield or a communicator or some other fantastic thing. They would deduce this or that, fit it here or there into the puzzle, and eventually they would have a complete picture of this great Galactic Union. Everything was useful.

"Noted," said the voice inside his head.

A lean, black cat darted out of an alley to their left and paused to study them with large, speculative eyes. Fader hastily crossed the street, beckoning the Examiner to follow.

The Examiner looked thoughtful, but said nothing.

A row of shops were to their right, their windows displaying casually the goods available within. Most of it was handicraft stuff—increasingly desirable in an age of automatic factories. All was for sale; it could be bought with that

intrinsically worthless stuff—money.

The Examiner passed from a window displaying a single, large, red tomato to a shop distinguished by a bucket swinging from a mast anchored above the front window. The lettering on the window said, "BUCKET-SHOP."

"A bucket-shop," Fader explained, "once specialized in gambling with clients on bets the clients couldn't win, pretending to deal in securities that it actually never bought. But now there are no stocks, no grain futures, no markets, and no need for them. Bucket-shops today make book on any contingency the customer chooses, setting adequate odds to protect themselves. In effect, the customer accepts long odds for the privilege of choosing his bet."

"Then he can bet on anything."

"Anything ascertainable. The proprietor of this shop, for instance, would accept your bet on how many molecules of water that bucket would hold, whether the next heli-jet to land on the hotel roof would be a Ford or a Cadillac, whether you will die before you reach the age of five hundred—"

"It serves as a form of insurance, then?"

"It could but it doesn't. No one has any reason to be afraid of the future."

The public room of the bucket-shop was spotless and air-conditioned. Walls to the right and left were miniature, black tote boards. On them, in glowing, occasionally changing letters and figures, were the odds against the occurrence of a number of contingencies, in alphabetical order, beginning with

"Air Temperature (noon)."

Two rows of comfortable-looking chairs were lined back to back down the center of the room. The customers in them studied the walls or placed their bets with the proprietor at the back of the room. He sat behind a high, wide desk in his black coat and green eyeshade.

"Fader!" he explained. "What can I do for you?"

"Name the odds on rain before noon."

The man in the green eyeshade pointed to the wall at his left. The wall announced:

RAIN

During the next hour	100-1
Before noon	25-1

"Want to take a flyer?"

Fader shook his head. "Sorry. It just might rain, and I'm going to need my luck. Are you making book on the possible lifting of the quarantine?"

"No. But I'll take all bets at ten to one over the next fifty years."

"It's your opinion," the Examiner asked politely, "that the Galactic Union won't lower the barrier?"

"That's the meaning of the odds," he said, studying the Examiner as if he were seeing him for the first time. "If they'd ever meant to take it off, I don't think they'd have put it on."

"What odds," the Examiner asked softly, "on man reaching outer space?"

"That's a different matter," said the man in the green eyeshade. "On that you'll never get more than even money from me."

"He was expressing his own opin-

ion, of course," the Examiner said, when they reached the street.

"That's all any of us can do," Fader observed. "He's different only in his readiness to put his money where his mouth is."

"He owns that business clear?"

"Less the government share," Fader corrected. "For gambling profits that's fifty percent. Government stickmen collect daily—"

"That should complicate the business of government."

Actually, of course, it had simplified everything. The few essential government expenses were taken care of on a daily or weekly basis. The remainder was distributed periodically as a citizen's bonus. So it returned to those it came from, and the circle was complete.

The government stopped losing money. Taxes were eliminated. The staggering public debt was retired within a few years.

It was true that the government was involved in gambling, but then it always had been. Even when gambling was generally illegal, most states were partners in legalized parimutuel betting at the tracks; only when bets were offered and accepted away from the track—where no portion of the money was forfeit to the state treasury—was it declared illegal.

In Nevada the state was a partner in all gambling enterprises—on top of taxes and fees—to the tune of two percent of the gross. The federal government taxed gamblers and gambling devices wherever they happened to be, irrespective of their legality.

Such schizophrenic standards made honesty in government a practical impossibility.

Most people and most governments never quite made up their minds about gambling. Gambling always existed on the borderline of respectability.

It would be easier to count the societies that did not gamble. Australian and South African bushmen competed for prizes. The primitive Teutons gambled themselves into slavery like Sudanese and West African natives,—who first staked wives and children. Chinese gamblers wagered their right hands and, losing, cut them off. Wealthy Romans lost their entire fortunes on chariot races; Twentieth Century men embezzled and went to jail, speculated and committed suicide in droves.

Gambling was always a government preoccupation and often a government monopoly. Queen Elizabeth I established a lottery in England. German princes of the 18th and 19th centuries maintained gambling as a state monopoly. Lotteries helped found the United States; General Washington bought the first ticket in a benefit for the U.S. Army. In 1946, Brazil's treasury got one-sixth of its income from a share in legalized gambling enterprises.

Periodic attempts at suppression were based upon the assumption that gambling injured the productivity of workmen, but sometimes it was considered to threaten the basic structures and assumptions of society. Yet even in the middle of the twentieth century, when gambling was generally illegal, it was a \$30 billion industry with annual profits of \$6 billion to its shady promoters. That was more than the combined profits of United States

Steel, General Motors, General Electric, and the remaining ninety-seven of the hundred largest United States manufacturing companies.

"But," Fader pointed out, "with the devices you gave us we didn't have to worry about production. We didn't have to, meddle in the lives and pastimes of the public."

They had reached the residential section — colorful, blown-plastic houses in neat little green plots. On the opposite side of the street was a collection of plastic bubbles joined by roofed passageways.

"That's a schoolhouse," Fader said. "And it seems to be recess."

IT WAS an elementary school. The playground held a few groups of eight or nine years of age, and one kindergarten group that couldn't have been more than six.

The last group was close to one of the walls. Some of the children were kneeling. Others formed a circle around them.

Fader heard the familiar sound of two cubes clicking together. "Roll 'em," said a childish treble. "you're faded!"

An arm moved back and whipped forward. Two transparent dice tumbled out, hit against the wall, and spun backward until they came to rest.

"Snake eyes!" cried the same voice with glee. A boy raked up a small heap of coins in the center of the circle.

As the Examiner moved aside, Fader heard the voices following them.

"They hit!"

"They miss!"

"A natural!"

"Baby needs a new pair of shoes!"

"Sixty days. You'll never make it!"

"And up jumped the devil . . ."

"Gambling?" the Examiner asked, nodding toward the little knots of children.

"Obviously."

"Couldn't they be doing something more rewarding?"

"How?" Fader asked, surprised.

"This is their education, their preparation for life."

"They study this?"

"Exactly." A slow smile played over Fader's lips. I'll have to watch out for some of them—if I'm around a few years longer. The young ones will be taking over from me some day."

"Instead of learning about life, they learn to play games," the Examiner said, nodding his beautiful head.

"What is life but a game? Their education has been re-oriented, that's all."

Fader caught the arm of a passing boy, a sturdy, bright-eyed fellow. He waited respectfully.

"What do you learn in school, son?" Fader asked. The boy looked politely blank. Fader smiled. "That was a little general, wasn't it? Do you learn to read?"

"Yes, sir," the boy said.

"What do you read?"

"Let's see." There's *Hoyle's Rules of Card Games*. This semester we've got *Scarne on Dice*. Next semester we're going to study *Jacoby on Poker*."

"Can you write?" Fader asked.

"Yes, sir." And, without prompting, he continued, "We've been making book, Fader, and filling out

policy slips, that sort of thing."

"Arithmetic?"

"Elementary odds."

"Thanks, boy," Fader dismissed him with a smile.

Fader spread his arms out wide as if he included the world within them. "An education must be centered around something, and what is in the center is relatively unimportant. Gambling, embraces all the vital branches of knowledge. It concerns itself with sociology, psychology, and history. It makes necessary the study of physics, chemistry, electronics, statistical analysis, and the scientific method. It concentrates on mathematics, odds, and the nature of chance and its role in the universe. In the sense that probability began as a study of gambling odds, it gave birth to modern mathematics."

In secondary school and college curriculums the courses became more specialized: The Ethics of the Gambler, Statistical and Inductive Probability, Craps Through the Ages (with laboratory), The Uncertainty Principle and It's Counter-part in the Macrocosm, The Psychology of the Winner, Playing Card Design, The Loser's Ductless Glands, Von Neumann's Theory of Games . . .

"There is no greater laboratory," Fader said, "for the study of psychology and sociology than this society. Here things are stripped of nonessentials, of all pretense. Every day a man can see—and run—every mood from the darkest gloom to the most ecstatic joy. As Nick the Greek said more than one hundred years ago, 'A man will expose his deepest emotions for a ten-dollar bill.'"

FADER stopped in front of the restaurant and glanced up at the tote board a few blocks away. The situation had already changed.

FADER MARTIN	\$11,503,762,016	2-1
MONTE JONES	5,220,996,843	25-1
JOHN HEAD	3,101,532,791	6-1
LUCKY KNIGHT	3,095,466,832	30-1

Praying John had almost doubled his capital. He had won an amazing sum of more than a billion dollars.

Automatically Fader calculated the odds. He would give two-to-one that he would be forced to meet John Head before the week was out. A lot of smart money was going down on Head; the odds showed that. The lucky man always attracts a crowd of side-bettors who hope that some of his luck will rub off.

At the table the Examiner toyed idly with a meal of plankton and chlorella. Reaching for the salt, Fader knocked it over. Salt poured out onto the table. Automatically he picked up a pinch and tossed it over his left shoulder.

"That seems to belong to the same category of actions," the Examiner observed, "as your avoidance of a black cat this morning. Even the meaningless becomes significant when persisted in."

"If you were around me longer," Fader commented drily, "you would notice that I wear this same rather threadbare shirt on important occasions, that I go out of my way to give money to beggars—"

"They are efforts to propitiate some forgotten gods, then, in order to secure good luck or ward off bad luck."

Surprisingly, Fader shook his head. "There's nothing forgotten about these gods. They're very

much alive. Gamblers are superstitious, sure. They have to be. Their fates are controlled by chance. So are all our fates. We would be smart to pay more attention to the propitiation of those possible controlling powers which say to us: win, live, grow—or lose, die, diminish. On a hunch, perhaps, the gambler hedges his basic bet with life. He is familiar with circumstances which can scarcely be explained except by predicating the dominion of the unseen. Luck has favorites; it is arbitrary, ironic, decisive—"

"Projection," the Examiner observed, "is a familiar phenomenon."

"What does a man lose if he acts as if chance were a vital, manipulatable entity?"

"The power of making his own decisions."

"Those are best left to chance. Like this." Fader's hand moved. The silver dollar glittered in the air. "Tails," he called it, and grimaced.

The Examiner leaned forward. "What decision was that?"

"Whether I should continue the conversation," Fader answered wryly. "The coin said yes. For millennia, you see, we chased cause, like a pack of dogs after a bitch in heat. Where did it take us? To that fiery wall you placed above us in the sky. Your ship just 'happened' to be close by when we emerged into space."

"That's right."

"It was chance, then. Luck was with you, sir. Ours had run out. Can you blame us, if we look on causation with disfavor and set chance in its proper place—that of the supreme arbiter of the universe?"

"It may be natural but it is scarcely intelligent—"

"Suppose we had reached Mars or Venus before you had discovered us? You wouldn't have chased us back. Isn't that right?"

"I can say only that it has happened that way in other cases," the Examiner said gravely. "Then we adjusted ourselves to the reality of the presence of the uninvited races among us. But you were not yet in our midst. From our viewpoint, we happened upon Earth just in time."

"So it would seem," Fader said softly.

"And from your viewpoint," the Examiner went on earnestly. "It is not so much a denial of space as the establishing of an entrance examination. Demonstrate that you are capable of making sensible laws and abiding by them from no compulsion except that of logic and we will welcome you with great warmth and joy. You wouldn't admit a savage into your society until you were satisfied that he was capable of obeying your laws and predisposed to do so."

"Perhaps not," Fader admitted. "But that presupposes that you have property rights on space."

"It does," the Examiner agreed. "And we do."

Fader studied the Examiner's face, moved for the first time by emotion; what emotion it was, Fader couldn't decide.

The Examiner went on. "It is painful for me to speak bluntly. On my world it would be considered an insult that you force me to do so. Among civilized men, offensive speech is unnecessary. The facts of existence are apparent

to everyone. I mention this only to excuse my own conduct—"

"Because after all," Fader interjected, "we are an inferior race."

"Your race has an unnatural bent for rubbing salt in your own wounds. We do have the power to restrict any race to its own world. The presence of that power implies the right to use it—"

"I have heard that theory expressed before," Fader mused. "Then it was called 'might makes right.'"

"It is not only might that makes right. Wisdom makes right. In any society except the most primitive, might and wisdom are only two aspects of the same thing. What we have done is forbidden your entrance into our society, defined as the area beyond the orbital sphere of this particular world's outer satellite. The right to determine the constitution of any society belongs to the society alone."

"You've penned up your savage," Fader said. "But you wouldn't be surprised if the savage should try to escape?"

"Surprised, no. Concerned, yes. The power of the Galactic Union is not lightly invoked."

"So we have cause to understand," Fader said grimly.

"Attempts have already been made?"

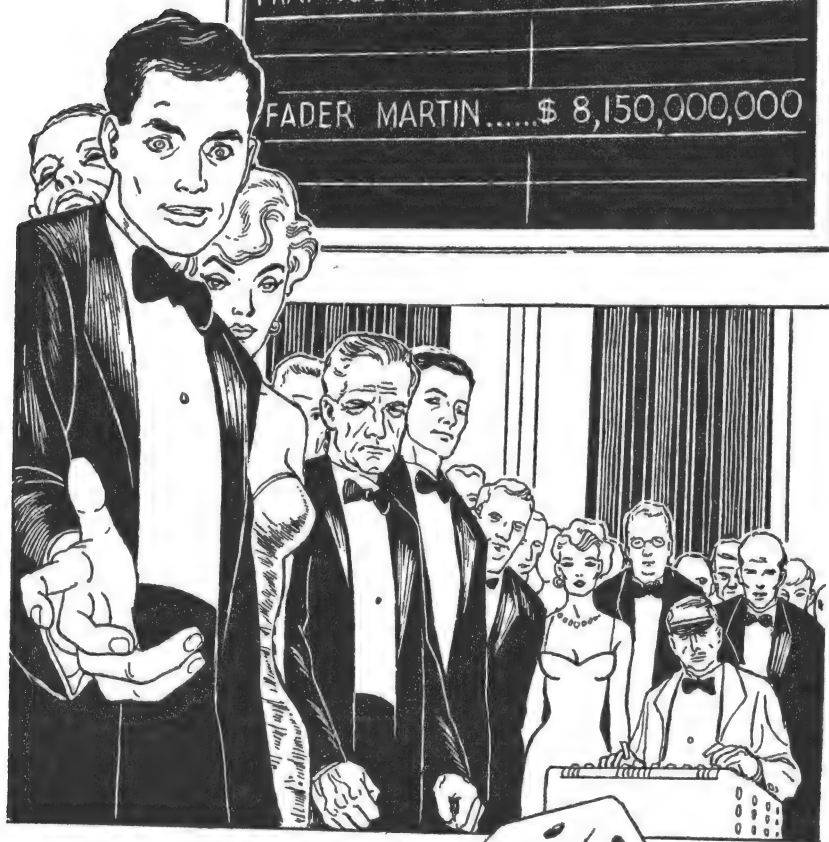
"Naturally," Fader said. "How could we accept your word for the existence of a wall around Earth? It might have been a bluff."

"The Galactic Union," the Examiner said evenly, "does not bluff. It does not need to."

"True. In this instance, anyway. Ships probed it here, there, wherever there might be a possible hole,

PRAYING JOHN HEAD...\$ 8,150,000,000

FADER MARTIN.....\$ 8,150,000,000



and they flamed down from it like falling stars."

"And you discovered only that it was there."

"That's right," Fader said heavily. "We don't know to this day whether the effect is caused by a force field, an ionized layer, mass hypnosis, or something completely beyond our comprehension."

"No reaction," said the voice inside Fader's head. "*It must not be any of those. Surely he'd have twitched a muscle somewhere.*"

"And you won't find out from me," the Examiner added. "All you need to know is that the wall will keep you in until we choose to remove it."

"We wonder," Fader remarked, "how your ship managed to come through the barrier—and how you will leave. Can you turn off the wall at will, does it cut off automatically as your ship approaches, or is there some immunity in the materials or construction of the ship itself?"

The Examiner shook his head.

"Precautions have been taken to keep us from learning?" Fader asked innocently.

"They have. Less civilized races may be tempted to force answers from Examiners. That cannot be allowed. Reprisals—which I cannot itemize or categorize—would be taken. Moreover, either I know nothing, or the answers are locked into a neural pattern which only death can dissolve. That is, if you are able to put me to the question in spite of my considerable ability to resist."

"You wrong us," Fader said. "Force is the farthest from our intentions. We are, however, a people with free-roving, speculative minds.

We speculate, for instance, that we might be able to learn a great deal from an inspection of your little ship—"

"That, too," the Examiner said firmly, "you cannot do. The port can't be opened without destroying the ship. Even if you could enter safely, what you saw would be meaningless."

"Don't underestimate us," Fader advised easily. "We are a clever, ingenious people."

"We do not underestimate you. But you could no more understand the devices inside my ship than a bushman could understand one of your printed circuits without any knowledge of electricity."

"This began, I think, with your hope that we weren't trying to escape. You've seen our rusty ships; let them answer."

"Billy's inside. He just reported. Inside the ship?"

"Right."

He's not to touch anything. He understands that, doesn't he?"

"Sure. Don't worry. He wouldn't know what to touch. He's just taking pictures. He wants to say it's no dice, though. It's all crazy in there. No apparent controls. No power plant. Just lots of decorations. Can't tell the controls from the decorations without a program."

Maybe the experts can make something out of it.

"Too bad they can't get in there themselves."

That's the price they pay for being experts.

Fader completed the pushing of his chair back under the table and looked up. "The next item on the agenda is a trial by chance."

THE CLEAN, cheerful courtroom was identified by a miniature statue of Justice, scales in one hand, sword in the other, standing on a corner of the desk. The desk itself was a transparent, red cube decorated with opaque white spots. The top was covered with green felt.

The judge behind the desk was listening to a summation by a man in a green eyeshade and a black coat.

The man in front of the desk had, the stickman declared, made a bet that he could beat another man at a game of chess. The bet had been made publicly; the game had been played publicly. The accused man had won.

The judge nodded at Fader and then asked the accused man if the charge were true.

"I did what he said."

"Have you played chess against that man before?"

"Yes."

"Did you beat him then?"

"Yes."

"Has he ever beaten you?"

"No."

"I ask you, isn't it a fact that skill is so predominant an element in the game of chess that the outcome of any one game can be accurately predicted?"

"Well—"

"In every game there is an admitted and recognized advantage on one side or the other?"

"Well—yes. But he said he could beat me. He thought he could beat me. We were betting on a difference of opinion."

"But you knew—did you not—that you were superior, that you could beat him, just as you had

beaten him before?"

"That was my opinion."

"And his opinion to the contrary was only evidence of his ignorance of the game?"

"Well—I won—"

"Exactly. You were cheating."

"Some opinions are founded on fact and some are baseless," the judge said. "The person who has knowledge and bets in accordance with it, is taking an unfair advantage. To take an unfair advantage is to cheat, and cheating will not be tolerated."

Fifty years ago courts had been concerned with the suppression of gambling. This society was not remotely concerned with suppression. But it was concerned with the function of all courts, the preservation of society. The greatest threat against a society based on gambling was cheating. Only widespread dishonesty could incite rebellion and force a return to yesterday's narrow, futile puritanism.

A game of skill could not be defined except as a form of cheating. It was as reprehensible as the loaded dice or the gimmicked wheel. In fact, it was even more dangerous to society.

"But understand this," the judge concluded. "Society is concerned only with your public acts. What you do in private does not concern us. But in acting publicly you made society the judge of your actions. We disapprove. Have you anything to say before I pass sentence?"

"No, sir."

"You are fined the full amount of the bet," the judge said sternly, "and you are forbidden for a period of six months to enter any public place where gambling is conducted,

to place any public bets with anyone or by any public method of communication. Do you wish to appeal?"

"Yes, sir," said the convict.

The judge touched the base of the goddess of justice. A door sprang open. Out upon the felt top of the desk rolled a single, many-sided die, on each face of which was engraved an "A" or a "D." It stopped with a "D" uppermost.

"The appeal is denied," said the judge.

"In our courts," Fader muttered to the Examiner, "justice is not only blind, it is as impartial as chance."

A cab drifted down from the sky like a whirling seedpod and waited patiently while Fader and the Inspector climbed in. Fader whispered into the where-box.

"You have a great preoccupation with cheating," the Examiner observed.

"It's a serious problem" Fader replied soberly. "The basic premise of our society is equal opportunity. If the odds are rigged in favor of anyone, it will result, inevitably, in the ultimate destruction of the society. It may not be a perfect society, but it is a good world in which no one goes naked, hungry, or unsheltered. There is no war, no murder, no crime. The ideal form of competition is available everywhere, to everyone. It's a wide-open world, with impenetrable skies."

"But you have trouble with cheating?"

"Outside of the games of skill, no. There is a kind of Gresham's Law of gambling—honest games

drive out the crooked ones. A gambling house that consistently rigged the games or the odds would soon be deserted; the customers would soon transfer their patronage to houses that gave them better returns for their money. Games of skill are another thing."

"Why is that?"

"The human critter is funny. He has to demonstrate his superiority; it's a compulsion to compete and it dies hard. Man can't stop trying to beat the game. That's what makes him unique."

"And that," the Examiner said quietly, "is what makes him an undesirable. The only citizens we can accept are those who will play the game according to the rules."

"According to *your* rules," Fader amended. "Life's only requirement is survival."

"But when we ourselves decide the conditions under which we shall survive—then we become Life's master instead of its slave."

Fader studied the Examiner's face. It was calm and peaceful; this face, if any, had mastered Life. From these lips Man could accept the advice of the angels. Fader wondered, as he had wondered before, if that day one hundred years ago had seen the alien's *first* visit.

"Don't expect the impossible," he said. "Man has always insisted on making his own rules as he went along. I'm not praising or defending him. That's just the way he is."

"Then he must reconcile himself to seclusion. It is our game, and we *do* make the rules. But no race is so rigid that it cannot change; no species is so stupid that it cannot learn. My only question

is: can you teach yourselves? So far I haven't found any evidence that you can."

"What kind of evidence?" Fader asked quickly.

"My visit to this world should be the central fact of your society. Around it, the school curriculum should be developed. The great philosophic question of the century should be how humanity can make itself acceptable to the Galactic Union. Instead I find that nothing is taught about us, nothing is said about us, and nothing is done."

Fader smiled wryly. "Here the basic facts of life are not the subject of classroom discussion. Nor do philosophers concern themselves with questions already settled. What we are doing—that you must see for yourself."

"Billy's out. Just reporting. No incident."

The jets cut out, and the taxi hung, swaying, from its rotors. Below them was a long, dark oval around a central field of manicured turf. Along one side of the oval stretched crowded stands.

"We should be just in time," Fader said, "for the fourth race."

FLASHING the brilliant racing colors of their stables, the squat, buglike machines raced around the oval, jostling each other at the turns, falling behind, pushing hard to pass in the stretch, and finally flashing under the finish line in front of the cheering crowd.

Fader studied the horse in the victor's chute, where it was nuzzling its fill of current, and glanced down at his program. Shoo-In, Calumet entry, the favorite. He

looked up at the tote board. The horse had paid 5-2.

In a box a few hundred feet way, a knot of young men were yelling excitedly, jumping, pounding one of their number on the back. Fader smiled; someone had a winner.

"Isn't it obvious," the Examiner asked politely, "that one of these machines is built better than another, that one is intrinsically faster? What uncertainty is there to bet on?"

Horse racing had been man's perennial pastime for millenia, but the machine age brought a revolution. As civilization grew more complicated, more urban, people became more interested in machines than animals. The tracks, frantically searching for ways to stay in business, had an inspiration.

Researchers into response and learning mechanisms, had developed a simple electrical device for studying the process. It sought out a source of current and charged itself, learned a maze, and retraced its path to its "food" in shorter times. Here, in primitive form, was a device which combined mechanics with the individuality and uncertainty of horses.

The mechanical horses became a craze. They took over the tradition, color, and ceremony of the track instead of the speedway. To the public they developed personalities and recognizable techniques. One was smart in the jams; another was fast getting away; a third was strong at the finish.

Running times varied considerably depending upon lubrication, overhaul, repairs and innovations, track conditions, and a certain intangible—

The fifth race was a continual human thunder from the starting gate sprint to the finish.

The tote board told Fader that his tip had got around. The odds on Earthbound had dropped from 9-1 to 7-2. Like most horseplayers, the elevator boy couldn't keep a good thing to himself. "Horseplayers die broke," Fader muttered.

It was Earthbound and Fencebuster going toward the wire nose and nose. Slowly Fencebuster pulled away and flashed across the line.

Fencebuster had come in at 20-1. That Earthbound should have lost to a dog like that was nightmare stuff.

He shrugged. That's what made horse races.

"If you like," he said, as he got to his feet, "we can go around to the stables and see the horses."

They passed close to the group of jubilant young men Fader had noticed before.

"Four winners in a row!" one of them shouted. "What're you gonna do now, Johnny-boy? Are you gonna choose the old man, Johnny?"

He was talking to a dark-haired, sullen-looking boy in the center of the group. The boy muttered something, but Fader and the Examiner were already past.

Johnny! Fader turned the name over and peered under it. Could that sullen boy be Praying John Head?

He knew, with a sick, cold feeling in the pit of his stomach, that it was.

"You're right. We've got our eye on him."

Want to book a bet on how soon

he chooses me?

"Nope. He hasn't quite made up his mind."

The challenge, Fader knew with intuitive certainty, would come before the day was over. No matter what effect it had on the future of all Earth, it would come.

It was a hell of a time for a boy like Johnny to lift himself out of the masses and drive for the top. But that, after all, was the function of the society.

The horse lay upside down on the workbench, its insides strewn across the surface. The Examiner glanced casually at the haphazard arrangement of wires and motors, transistors, condensers, and other items of electrical equipment that Fader couldn't put a name to. "I see," said the Examiner.

Fader frowned. Had the alien understood it completely in that one sweeping glance?

"I don't understand this receptorlike mechanism which seems to lead to the variable accelerator, bypassing the battery."

"That," the greasy mechanic said proudly, "is the button. Invented right here in the Calumet Stable almost fifty years ago."

"And a notable contribution to the economy," Fader added.

"What does it do?" the Examiner asked.

The mechanic wiped his hand across his sweaty forehead. It left a black smear. "It speeds up the horse. That's what it does."

"How?"

The mechanic scratched his head. "Well, the bettors, they hope their horses win. If they hope hard enough, the button picks it up, see,

and makes the horse go faster."

"An application," Fader said, "of what we call the Rhine Effect."

"Some sort of mental control of matter?" the Examiner asked skeptically.

"Yeah," the mechanic said.

"Yeah. That's it."

"Have you any proof that there is such a thing?"

"Not what you'd call proof, maybe," the mechanic admitted. "But we don't have any proof that there ain't, either. And it sure pepped up the betting."

"An increase in the circulation of money," Fader said, "is always a good thing."

"And is it a good thing to delude the general public into belief in fantasies?"

"Fantasies?" Fader repeated as they threaded their way through the crowd heading toward the parimutuel windows.

"You have no proof," the Examiner pointed out.

"Depends on your definition of proof. Suppose a man should toss a coin into the air and call it heads. What would you call it if heads came up?"

"Chance."

"Suppose a machine should flip it, with a man concentrating on making it come up heads, and it came up heads one hundred times out of one hundred?"

"Then—possibly—I might suspect that something immaterial was influencing the coin. Have you seen that happen?"

"Not personally," Fader admitted. "But I've heard about it. My experience as a gambler makes me suspicious of anything that consistently beats the odds."

"If you were a scientist," the Examiner said evenly, "what you would suspect would be any easy explanation for phenomena that cannot be duplicated under scientifically controlled conditions. By tonight I will have my decision."

"And will Earth have it, too?" Fader asked.

"Yes."

Fader could not repress a shiver. It was a familiar sensation, compounded of fear and excitement. A helijet swooped down at his summons. "The Wheel," he said into the where-box.

The taxi lifted on whirring vanes.

"It would be an honor," Fader remarked, "if you would consent to do the drawing in this semi-annual lottery. Lottery players are a superstitious lot—even more than the rest of us. They like ceremony."

"I have no objection," the Examiner said.

"Good," Fader said happily. "We'll have to dress you for the part."

FADER waited outside the dressing room. Politely but firmly, the Examiner had made it clear that he wished to be alone. It didn't matter to Fader. The cameras would see more than he could.

When the Examiner finally came out, he walked in a blaze of glory. The rose-red silk of his blouse was sprinkled with diamonds, and his slacks were almost stiff with priceless hand embroidery.

"Policy players," Fader told him, "have a saying: 'A raggedy man wears his hard luck on his back.'"

The broad plaza was jammed so tightly that it looked pale with up-turned faces. The giant, clear-plastic wheel was almost filled with millions of tiny, white balls. Fader held up his hands toward the pallid lake. "Let the drawing begin," he said. Hidden microphones picked up his words and threw them out for the waiting ears. The crowd roared like a crashing surf.

The giant wheel spun until its outlines blurred and the clacking of the tiny balls against the sides was a steady drum roll. It coasted to a stop. A small door swung open.

The Examiner reached into the wheel and pulled out a ball. It fell into two halves. Inside was a slip of paper. He read off the number printed on it. At the same instant, each numeral sprang up, glowing, on the board behind him.

Again the wheel was closed, was spun. Again the Examiner reached into it. He read off a second number. There were twenty prizes, and they were drawn in ascending order.

On the ninth draw, a woman's voice screamed, "That's my number!" And the living waters moved, rippled, parted, and surrendered up a swaying, breathless, middle-aged woman.

As the Examiner reached into the wheel for the twentieth time, Fader watched with a queer sense of urgency. It was as if the lot were being cast, as if the alien were withdrawing from the great wheel of Destiny, Man's fate.

The Examiner read the number impassively. Behind him the numerals marched inexorably across the top of the board, hushing the

crowd as if by some ancient magic spell. And then the last number flashed, and a small section of the human lake exploded.

A young man was tossed above it and seemed to ride over its waves up to the platform.

The grand winner was Praying John Head.

He had a whole ticket—no tenths or twenties for him.

Fader moved forward to shake Head's hand.

Head glowered at him, unmoving. Slowly, insultingly, he turned his back and stared over the crowd at the distant tote board. As everyone watched, the numbers flickered, a name was wiped off. . .

FADER MARTIN	\$11,503,762,016	5-2
JOHN HEAD	4,892,175,432	5-1

Head swung back toward Fader, a bitter smile twisting his young lips. He jabbed a finger toward Fader as if it were a rapier. "I'm choosing you," he grated out.

"Now son—" Fader began pacifically.

"Don't 'son' me!" Head exclaimed, shaking his shoulders as if Fader had laid his hand on him. "You're challenged. What are you going to do about it?"

Fader shrugged helplessly. "Only one thing I can do—"

"Then do it. Name the game."

"Craps."

"The Golden Nugget, then," Head agreed, nodding almost happily now that the challenge was accepted. "Eight o'clock."

Somewhere a woman's voice was calling, "Johnny!" A girl scrambled up on the stage. "Johnny!"

It was Jan, the girl from the Desert Inn tobacco counter. Her

face was flushed as if she had run a long way.

"Johnny!" she demanded. "What are you doing here? We were going to win fifty million and stop. Now I find that you've won almost five billion. Where's it going to end?"

"At the Golden Nugget. Tonight. I just chose Fader."

"You're mad!" the girl exclaimed angrily. "What have you got to lose? Everything. What have you got to gain? You don't want to be Banker."

"It's time somebody took this old bastard to the cleaners," the boy said sullenly. "And I'm the one to do it. The almighty rule of chance! Hah! He's been Banker for twenty-five years. There's only one way he could have stayed there. He's a mechanic. The whole thing's rigged, the whole damned world! Well, there's going to be some changes—"

"If you go through with this, John Head," the girl began, the words frosty and precise—

Fader put up a hand to stop her. "Don't threaten anything rash. It's all right. We do what we must." He nodded at the boy. "Tonight, then!"

The boy jerked his head in acknowledgment and stamped away. Fader forgot him immediately. It was the Examiner he was curious about.

Glitter Gulch, the greatest concentration of inert gas in the world, cast a neon glow for fifty miles into the desert. At the corner of Fremont and Second Street, in the heart of Glitter Gulch, was the Golden Nugget. Hanging in the air

high above the building was a blazing nugget of gold.

The floor felt rough under Fader's feet as he followed the Examiner into the building. It was paved with silver dollars, worn down now by countless passing feet until the cartwheels were only polished silver circles in the concrete.

There were endless banks of slot machines at the entrance, chattering and chugging continually, and there was even a constant tinkling of coins into pay-off cups. It was Nevada's pride that the state produced more jackpots than jack rabbits.

But the players were grim and silent as they fed coins into the bandits with automatic precision.

"Is this pleasure or punishment?" the Examiner asked.

"Pleasure," Fader replied, smiling wryly. "There's an old saying: You pays your money and you takes your choice."

As they passed the Last Chance bar, Fader stopped impulsively. "Double shot of rye, neat," he said to the bartender in the sleeve garters and apron. He turned around with the glass and raised it in mocking salutation to the Examiner's judicial eyes. "To freedom," he said and tossed it down.

As he set the glass back on the bar, he pointed out the diorama behind it. It was the desert lashed by a thunderstorm, convincingly realistic. In the distance was a wide, concrete spaceport, swept with rain. The ship took off in the middle of the storm, its rocket exhaust a paler, more permanent lightning. It faded slowly in the night until there was only a pin-

point of flame, and then that, too, was gone. The storm quieted as if it had been beaten.

Darkness settled over the diorama. Suddenly the night was broken. A new star was born into it. It hung motionless for a moment, flaming. Slowly then it began to fall, picked up speed like a spark against a black curtain, and like a spark it died away.

"A reminder of the wall?" the Examiner asked calmly.

"Entertainment," Fader replied. "People like to watch. If they didn't, the management would take it down. To us it's not a reminder of the wall but a reminder that Man has tried the impossible and failed. But he doesn't give up. He picks up the broken pieces and tries once more, just as the diorama always begins over again."

"Courage should have a better goal," the Examiner said.

The gaming rooms were crowded. They threaded their way between the tables—craps, black-jack, poker, faro bank—the chuck-a-luck cages, the roulette wheels, the keno boards, and an ancient wheel of fortune, bills fluttering from the outer rim.

They heard the immemorial argot: "They miss! . . . Hit me easy! . . . And up another five! . . . The case card is the king of diamonds! . . . Around and around the little ball goes—where it stops nobody knows! . . . Place your bets, ladies and gentlemen. . . ."

Around one crap table was a rope fence. Fader ducked under the rope, and held it for the Examiner to follow. The Examiner glanced at the long green table

with its white markings and foot-high plastic railing as if the rules of the game were obvious. "It is the privilege of anyone to challenge the person directly above him in financial standing?"

"Right," Fader said. There was a glass bowl full of clear, red dice. Fader picked out a pair and tossed them idly against the railing. They turned up a six and a one.

"You, as the Banker, can only be challenged by the person directly below you?"

"Correct." Fader did tricks with the cubes. The dice appeared and disappeared out of his hands or popped up out of nowhere to balance on fingertips. He moved a hand forward, and the dice appeared to spring out of midair. They spun around on the green felt. A five and a two.

"For twenty-five years," the Examiner said, "despite the omniscience of chance, you have beaten off all challengers. That seems like a statistical impossibility."

"What everyone overlooks," Fader said wearily, "is the hidden advantage of capital. The man with the biggest bankroll always wins. Chance has to have a little time to establish its impartiality. The first streak of bad luck wipes out the little man. The richest man can outlast everyone."

Fader looked at the big clock on the wall. The hands pointed to five minutes after eight.

WITH THE addition of John Head's following of young men, the crowd around the table thickened. Only Jan came through the ropes with him. She gave Fader

a fleeting, apologetic smile as if to say, *He's a fool, I know, but he's mine.*

It was one more against him, but Fader smiled back.

"Come over here!" Head snarled. Jan went. "Where's the dice?"

Fader indicated the glass bowl. "Take your pick."

Head rummaged through them until he found a pair he liked. "Let's make it short and sweet. One hundred million a roll until one of us is stony."

"You're faded," said Fader.

A green-visored croupier, donated by the house, settled a small computer at the far end of the table. A tote board behind the table lit up with the total assets of Fader and Head and the odds on each.

Head rolled the dice, leaning forward, his face tense, his eyes glaring. "Seven!" he demanded. It was a natural.

During the next half-hour, Fader learned how Head had earned the name Praying John. The boy exhorted the dice, pleaded with them, shouted at them, prayed to them, threatened and begged them. The dice responded nobly. Head made twenty-five straight passes. Fader lost 2.5 billion dollars.

As Fader gathered the dice into his large, thick-fingered hands, he realized what he was up against. Almost every person around the table was pulling for Head, betting on him, praying with him that the dice would be kind.

Fader glanced back at the board. His fortune stood at \$9 billion, Head's at \$7.3 billion. The odds had dropped to even-money, take

your pick.

"Billy says he can't do a thing from this distance, and it's too late to get closer. Too much interference, he says. You're on your own."

I've been on my own for a long, long time.

Fader swung around and whipped out the dice. Seven! He rolled again. A trey! He stared at it for a moment as if he couldn't believe it. He scooped up the dice and rattled them against the railing. "Nine from Carolina!" he said. "And again!"

"Up jumped the devil!" Head said gleefully. Fader had sevened-out.

When Fader got the dice back the totals were only \$700 million apart. Slowly, in spite of everything he could do, Fader lost.

At three a.m. Praying John sevened-out. He took a deep breath and spun around to study the board. The totals stood at \$8.15 billion apiece.

He swung back. "Let's get this over with. Shoot the roll!"

"Everything?" Fader asked quietly. He looked old and gray and tired. It had been a hard day—the hardest of his life, perhaps. Now this young high-roller goaded him to shoot the works on one roll of the dice. He rubbed his hands back and forth, the dice turning between them. His hands were still steady and sure.

"Your dice," the boy said.

"Shoot it," Fader said.

"You're faded!"

It was, without a doubt, the highest roll in the history of craps.

Fader whipped the dice against the rail. They bounced off and tumbled backward. When they

stopped, there was a five on one die, a four on the other.

"Strychnine!" Head shouted, relaxing a little.

"Ninety days," Fader muttered.

He had swept up the dice instantly. He blew on them and tossed them out again. A one and a three. Then two fives. A six and a four. Two fives. A six and a five. A one and a three.

Out of the corner of his eye, he studied John Head. The boy's eyes were glazed with concentration; sweat beaded his forehead and trickled down his nose to drop in black spots on the green felt.

Unexpectedly, Fader rolled the dice. Head started and looked down at the settling dice, his forehead suddenly creased. One die was a three. The other spun on one corner and then toppled. A six. A three and a six. Nine. Fader had made his point.

Praying John Head was broke. Incredulous, he stared down at the dice.

The Examiner, who had been watching impassively throughout the long game, stepped forward and put his long, thin hand over the dice. "May I?" he asked politely.

Fader forgot about Head and studied the Examiner's face as if there were some way to read it, if he only knew how.

EXCEPT for a diehard poker game still in session in a distant corner and the far-off intermittent rhythm of the slot machines, the room was deserted. Fader sat wearily beside the crap table. He held a die between his

fingers by diagonally opposite corners. It rotated in his fingers.

The Examiner studied the dice he had picked up. He looked up at Fader. *The Recording Angel*, Fader thought. "My decision has been made," he said.

"Was it ever in doubt?" Fader asked.

"I have learned enough about man to know that you wouldn't believe me if I said yes."

"You're right," Fader agreed, his lip curling just a little. "The decision is—no dice. No admittance."

The Examiner nodded slowly. "We are not primarily concerned, you see, with the standards or goals of your society. What we are concerned with, is whether that society works. My conclusion is that it does not."

"Do you mind telling me how you arrived at it?"

"Not at all." The Examiner tossed up the transparent red cubes and caught them. "The very bases of your society are false. Your reason for staying as head of this society for twenty-five years was specious. The only way you could do that was to cheat."

"You're wrong, there," Fader said quietly. "It's been necessary only a few times. Each time it has hurt." The very softness of his voice gave evidence of the depth of his emotion. "Each time it was more important that I win."

The Examiner's smile was sad. "It always is. I can't accept your statement as truth; you realize that, don't you? And even if it were, you, as the prime representative, stand for the society. A few times is as damning as always."

"How did you find out?" Fader

asked curiously.

The Examiner held out the dice. "They can't throw craps or sevens. One die has two ones, two fives, and two sixes; the other has two threes, two fours, and two fives. Since each number is placed opposite its duplicate and since no one can see around corners, no duplicated numbers are visible. No wonder you won that last bet. The shooter couldn't lose. All he had to do was keep throwing until his number came up again."

"Okay," Fader said, shrugging. "They're busters. But would you condemn a world for one pair of educated dice?"

"As a symptom of sick society, they are sufficient. Earth is sick, and humanity is sick. The prime representative is a liar and a cheat and a criminal, even in the eyes of his own society."

Fader looked up at the saintly face of the Examiner. More than ever he looked like Michael, the avenging angel.

"We found you torn and bewildered, groping wildly for the stars before you had even solved the simple problems of social living and the distribution of food. We gave you power and a means of using it, and you let it lead you into decay instead of liberation. Instead of freeing yourself from environment, you immediately set to fashioning a new, falser environment."

"Sick," Fader murmured.

"Sick," the Examiner repeated. "Sick inside where it is worst. Your society has grown all lopsided. There is such a thing as chance. But what is significant is how we react to chance. We can try to dominate it—and that becomes

skill and science. Or we can accept it as hopelessly beyond control; we can court it—and we have magic and animism.

"Why do men gamble? It is their surrender to the omnipotence of chance. It strips the relationship of man to his fate down to stark simplicity. 'Am I lucky or unlucky?' asks the gambler. The dice answer. And the answer is destruction.

"The animistic mind pleads with fate; the scientific mind tries to insure that fate will be favorable by forcing it to be favorable. As biological experiments, only the scientific response has furthered human progress. As an evolutionary experiment, only scientism has proved workable, because it alone increases our capacity to survive.

"As a valid experiment by beings, in their incessant quest to increase their power, gambling must be rejected as a mutation that has failed. The gambler's question to Destiny, the ultimate father surrogate, 'Am I favored?' not only denies that Fate can be dominated, but it rejects the very thought ways that lead to an increase in the domination of fate."

"Are you finished?" Fader asked, and his face seemed gray with fatigue.

"I can only add," the Examiner said gently, "that I hope Mankind turns away from this false road and finds itself back on its way to fulfillment and the stars."

"Very noble," Fader said. "Very moral. You come here with your angel face and your spotless hands, and you say, 'Stop, my friends! Come no farther until you are pure, like us! And we will give

you gifts so that you may put all your efforts into becoming pure of heart.' Nuts!

"Your hands aren't clean! They're whited over like sepulchers. Why did you object to our entering your saintly society? Because we were too struggling, too violent, too raw, too competitive. And you've stopped struggling, except to keep what you have. Sure we're cheaters, sometimes, and mean, sometimes, and crude, often. The wonder is that we're ever anything else, and we are.

"But you didn't want us among you. Instead you supplied us with power and the means to use it. Why? Was it out of a spirit of sweet charity? Ah, no! Was it even a conscience-money bribe? No, sir! It was a Greek gift, and we would have been wise to inspect it closely to see what secret things were hidden inside. Because these gifts made unnecessary our unrelenting struggle against environment—that struggle which took us all the way into space before you chanced upon us."

Fader was on his feet looking up into the Examiner's face, his voice loud and angry. "What was the motive behind that gift? It was intended to lead to that very degeneration and decay you come now to complain of.

"If this is what you wanted, it seems that you have succeeded."

The Examiner took a deep breath, but his expression didn't change. "It saddens us to be misunderstood," he said.

"But not half as much," Fader taunted, "as to let anyone among you who might not respect your rules. I'll tell you what decay is.

It's when the rules become so crystallized that they can't be broken."

The Examiner spread his hands helplessly. "There is nothing I can say."

"You might answer this," Fader said bitterly. "There must be other races in the same position as humanity. How many of them have passed their entrance exams?"

The Examiner studied Fader silently.

"I'll answer it myself," Fader said slowly. "The answer is 'none.' There was never a chance, you see, unless we made ourselves over into your image, and that we couldn't do even if we wanted to. We wouldn't play. The game was obviously rigged against us. And there is something rotten about the demands that we sit in the game."

"I will be back," the Examiner said, turning away, "in fifty years."

"Never mind," Fader yelled after him. "Maybe we'll come out to you."

Out of the darkness behind him came a single, violent word: "Traitor!"

Fader turned wearily. "Who's that?"

It was Praying John Head, his face twisted into a scowl. Behind him was Jan, clinging to his hand. Her eyes searched Fader's face.

"You didn't even try to impress him," Head said bitterly. "You tried to make him mad. Why don't you want the wall torn down? I can't figure you. For money you can't ever use you throw away Man's one chance to reach the stars."

"I didn't think you'd cheat," said the girl wistfully.

"Then you noticed it, too. These old hands must be getting stiff."

"I asked Johnny to come back to talk to you before he made a public protest. I told him you had to have a reason. You do, don't you?"

"Yes."

"Did it concern the Examiner?"

"Partly."

"Then you did want him to decide against Earth!" Head exploded.

"That's right," Fader said.

"Traitor!" Head repeated.

"Let me explain it," Fader said, shrugging, "and then you can decide whether the word fits. It doesn't matter now, because we have fifty years before the Examiner returns. If we haven't bypassed the wall by then, we never will."

"Bypassed?" Jan asked. "How?"

"I'll get to that," Fader said. "You accused me of cheating. I presume you spotted the busters that the Examiner saw. But did you see these?" He held up one die between his fingers again and let it rotate.

"Loaded!" the boy exclaimed.

"And even with these I couldn't win," Fader said ruefully. "I'd say that there was a rather powerful force working against me."

"But that's—there's nothing wrong with that," Head protested.

"So you say. How many straight passes can you throw?"

"Well, I can throw 'em all night, but I thought—"

"Exactly," Fader said. "You're loaded with PK. You can control the dice with your mind better than I can hope to do with my hands. They're both cheating. You're skillful in one way; I'm skillful in an-

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other. We both try to evade chance results. Man is a cheater. He always has been. He always will be.

"What happened when our world was quarantined? We turned to gambling. Why? That was the answer I didn't want the Examiner to find. But I couldn't hide it from him. All I could do was to keep shuffling the little pea under the walnut shells and hope that he couldn't follow. Shell game."

"But what was the pea?" Jan asked.

"The real function of our society. Every society rewards a specific type and tries to breed more of them: philosophers, soldiers, knights, authors, explorers, scientists, inventors, businessmen. . . Our society happens to reward the best gambler."

"You?" Head asked bitterly.

Fader laughed easily. "No, not me. Look at it this way! When humanity needs a certain quality, it can't breed it as the race horse was bred for speed. There's no one to breed him, and Mankind is forever a wild animal, always unspecialized. So what happens? We depend on evolution.

"When environment made muscles valuable, men had muscles. When brains were rewarded, men developed brains. When these become relatively worthless, natural selection ceases to operate in their favor. They degenerate. If a Neanderthal man should catch me alone, he could tear me apart—but give me a little time to build weapons and traps, and he wouldn't have a chance.

"Then the aliens came, and both muscles and brains became worthless. The aliens were obviously so

superior to us that we could never hope to catch up. The solution had to be one that involved neither muscles nor brains.

"Some men defy Nature. They find purpose in the universe, intelligence behind Creation, guidance in the selections of evolution. But if there is any purpose, any intelligence, any guidance—it seems to me that it lies inside the great, unconscious beast that is humanity.

"That collective, amorphous thing is stubborn and hard-headed. It won't die easy. If it can't survive one way, it will survive another. It will run fast when running fast will save it, grow muscles when muscles are necessary, develop brains when brains are vital.

"In the face of this new challenge, there developed—not a new talent, but a new society. Was it by chance? Perhaps. But it's significant that this society selected the one talent that could save humanity.

"PK. Psychokinesis. From the mental control of matter it's a small step to teleportation—not to mention the possibilities of telepathy, extrasensory perception, clairvoyance, and the direct control of destiny."

Jan turned excitedly to the boy beside her. "Don't you understand, Johnny? You're one of the people who will help put Man out among the stars."

"You're the one-eyed jack," Fader said, "the wild card in the deck. And you, too, Jan. You're talented, and your children will be more talented. It always works that way. Money marries money. Intelligence marries intelligence."

Head was still sullen. "I don't

see why we had to do it the hard way."

"That's the way man is," Fader said simply. "He insists on doing things his own way or not at all—because he wants to, not because he's permitted. When we go into space—and we will—it'll be on our own terms, not on the terms of the Galactic Union. We'll go because no one can stop us. And we'll stay there because no one can make us go back!

"The aliens wanted to make us over into images of themselves. That's a perennial impossibility—as any woman in love must recognize." Fader glanced at Jan and smiled. "And, like a woman in love, if they want us they'll have to take us as we are. Or, for that matter, if they don't want us."

THE CASINO was dark and silent. Only the single light cast a cone of brightness over the green crap table.

"That's the other reason you had to lose," Fader said softly. "It isn't good for struggling young men to come into money. A hungry fighter is the best fighter."

"Then, even if the Examiner had wanted to," Jan said, "you didn't want him to pass Earth. The reason for developing our special talents would have vanished, and we'd have come in as a hopelessly junior partner forever."

"True," Fader said. "Meanwhile I've had to try to suppress scientism. Scientism is always Man's reaction to chance. That's his eternal struggle—to reduce the role of chance and increase the effect of skill. He cheats. In one form it's

science; in another it's psi, the attempt to control chance directly, a mutation that is just coming to flower."

Head began hesitantly, "It sounds like we're drawing to an inside straight," Head objected.

"So far," Fader said, "we've put a man on the moon—"

The boy smiled luminescently. It was like the drawing of a dark curtain from a window facing the sun. "That's beyond the barrier!"

Fader nodded. "Soon we'll be able to put a man anywhere in the galaxy. Then let the Galactic Union reckon with Earth. Let them come to terms with us!"

"What are we waiting for?" Johnny demanded. "There's work to be done."

Fader sighed wearily as if he had just realized that he was very old and very tired. He sank back onto the stool.

"The Examiner's getting into his ship. Oh, man, am I tired! This long-distance telepathy should be on union hours. I'll be burnt out for a month."

"Thanks, Louis. You've done a good job. One recruit, coming up."

"Examiner just took off in a blaze of nothing. Bon voyage, and all that!" The voice in Fader's head began singing *Aloha* off-key. Fader grated his teeth and swore he'd have the surgeons open up his right mastoid and put a cut-off switch on the little receiver.

"Shut up!" he thought savagely at the distant telepath. *I've got enough head noise of my own!*

"You go, son," he said to Johnny. "My work is here."

"What do you mean?" Jan asked. Her voice was alarmed.

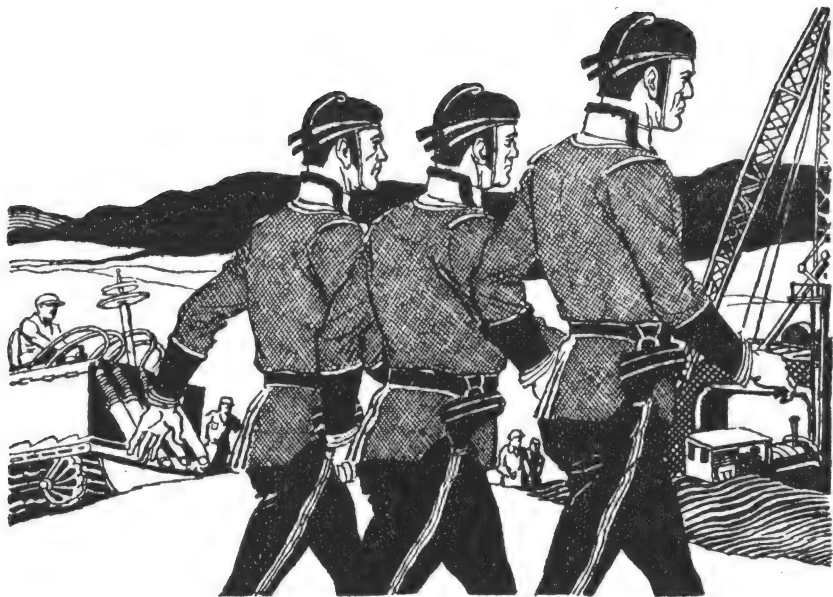
"The new worlds are for the young," said Fader, looking a little like Moses, who led his people to the promised land but could not enter himself. "I've got no psi. I'm just a tinhorn gambler without talent who has stayed where he is because of an encyclopedic memory, some manual dexterity—and a little outside help. I'm just a shill."

"A shill?" Head echoed.

"That's what I am. A shill!" Slowly a smile rose across the tired crags of his face. "But if a man has to be a shill, at least it's something to be shill to the whole wide universe." ● ● ●

DON'T MISS THE MAY ISSUE!

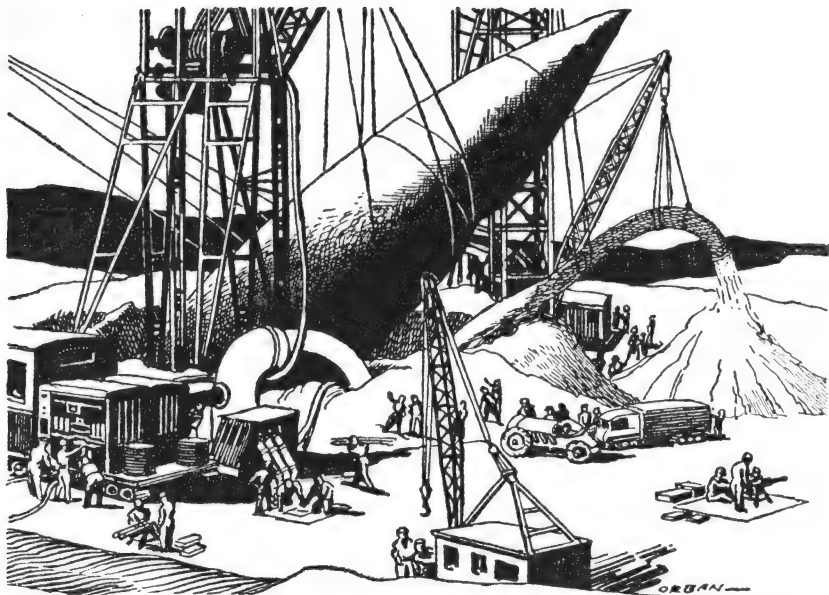
POUL ANDERSON has written one of his best stories in SNOW-BALL, a long novelette in the May issue. It's about a young professor who discovers a new source of electrical energy that anyone can bake—like a cake—in his own oven! What happens, as a result, to the great utilities, oil and coal industries, automotive industries, etc.—in fact, to the whole world economy—is a story you don't want to miss! Also in this issue is other top-flight science fiction by JAMES BLISH, E. G. VON WALD, CHARLES E. FRITCH and others.



*Captain Jorl thought Arcturus IV was the answer to all he
had ever wanted. And it was. But there was also a twist . . .
How can there be an ideal where everything is perfection?*

TASK MISSION

BY FOX B. HOLDEN



Illustrated by Paul Orban

CAPTAIN Nicholas Joel stood waiting in his fore-waist bridge; he looked again through its heavy, slotted quartz windows and now he could see them coming. He could make out the toy-like silhouette of their jeep, emerging in reckless, bounding leaps from the edge of the cultivated forest. Now they were racing at full tilt across the hard-packed yellow sand of the desert in a bee-line for the ship that had landed them here a scant three weeks ago.

Captain Nicholas Joel watched them, their excitement a visible thing as they pounded up clouds of saffron behind them, and knew without activating his personal communicator what they'd have to tell him.

"We've hit it again!" they'd tell him.

He turned his big body from the curving windows, quickly calculated the time it would take the jeep to reach the flaring stern of the *White Whale*, figured how many minutes it would take the pneumatic lift to whisk them three hundred and twelve feet up to the fore-waist, and snatched open the door of his liquor cabinet.

Sam Carruthers would be the first one to say it.

Thin, quiet Sam, who'd been in space as ship's surgeon and psychiatrist for as long as Joel himself. It had been twenty-two years since they'd left the Academy together. Sam had taken his specialty training in space medicine, while he,

Joel, had let himself get sucked into qualifying as pilot.

Twelve years of the Academy. And twenty-two more being ordered around the freezing hell of God's black universe like a toy on a string.

And for all of it, Sam still had that look in his dark, brooding eyes—the look that had been glazed with shock, but which had still not surrendered, the day they told Sam he wasn't going to make pilot.

The look would still be there four minutes and thirty seconds from now when he led the others into the fore-waist bridge to holler "We've hit it again!" It would always be.

Joel tilted the liquor bottle and one big, clumsy-looking hand poured steadily into the thick glass-ite flagon he held in the other. He downed it in a gulp.

Hit it again *hell!*

An behind Sam there would be the first officer, Dobermann. Little, wiry German who knew more about languages and semantics than the guy who'd invented them, and the best astro-navigator you could find in this or any other galaxy. Sure, they always gave Nicholas Joel nothing but the best. That was part of it. Part and parcel of the whole damn conspiracy.

Dobermann wouldn't say anything when he came in. But there'd be a thorough-going, successful, mission-accomplished look on his handsome face. Dobermann never missed.

And Southard. . . Still a kid, still wet behind the ears, but a hell of a promising astrophysicist, backed up with plenty of biochemistry and geophysics. It was still a big, romantic adventure to Southard, and

he wore the single red, gleaming stripe of ship's second officer on his broad young shoulders as though it was the thick gold circle of a full captaincy.

Joel filled the flagon and emptied it a second time. He went back to the windows, the liquor bottle and flagon still in his hands.

To most men, he supposed, the panorama that spread for miles from the stern of the up-ended *White Whale* would be a thing of sheer beauty. It would be hard for them to believe that there existed other planets far beyond the rim of their own hostile Solar System which could equal or exceed the soft beauty of the oasis they called Earth. But there it was—gently-rolling, golden desert beneath a temperate, dark-gold sun, flanked at one gently curving edge by a forest that looked as though it had been scientifically planned and landscaped for beauty. It was a big forest that covered a full third of the planet, and at its opposite edge it gave way to twelve thousand miles of unblemished shoreline which descended into gleaming, azure ocean.

And in the forest, on the ocean, even on the wide expanse of desert, there were people. Intelligent, strong, peaceful, quiet people, who might have been natives of Earth's Pacific islands of three centuries ago, save that their flesh was lighter in tone; their sun was not as young as Sol.

Farmers, mostly, Carruthers had reported. Some merchants, some travelers and explorers, even some men of a very young science, but, mostly, farmers . . . it was the way they lived. A good way, Joel

thought. A good way, in a good place.

He looked through the fore-waist bridge windows, and what he saw was beautiful.

But he filled the flagon again.

A buzzer sounded softly from the compact secondary control console which banked a full third of the bridge's fore bulkhead, and deliberately, Joel let it buzz a second and a third time before he fingered the stud that slid the small metal door open behind him. He turned as they came through it.

Fatigue and sweat lined Sam's thin face; Dobermann was audibly out of breath. Southard had to duck slightly to get into the room, but when he straightened he seemed as fresh as when the party had left the ship seventeen days before.

Joel returned their salute with the full flagon still in his left hand, and then beat Carruthers to the punch.

"All right, so we've hit it one more time! Bully for us—" He drained the flagon, reached for the bottle.

Without Carruthers, there would have been an awkward silence. But after twenty-two years, Sam knew his man.

"Ahh, you've shown us more than this, Skipper. I suppose it is a little better than our prelim reports indicate, if you want to get technical. The people want to co-operate. They're intelligent, healthy, and friendly and they realize fully what we're trying to do. They want to help us, and say we're welcome to all the mneurium-4 we want. 'Course there's only a few hundred pure megatons of it lying around,

but, if you want to get technical—"

"Go to hell," Joel said, and poured his flagon half full. He felt a little better, but it would take more than a half-bottle of Martian Colony Bond and Sam's wise answers to change things. "Go right straight to hell!" He sniffed at the Bond. "So the long arm of Superior Civilization has reached out its clanking claws again to make the Universe a Better Place to Live in, has it? God help 'em if they *believed* all the hog-wash you fed 'em, Sam."

The thin face sobered. "I spoke to them in good faith, Nicholas, and they did believe me. The fact is, they—"

"All right, I get your point! Got my mind made up, so don't start confusing me with facts." He transfixed the three of them with a restless look; a look they had grown used to. It was a gaze that matched the rest of him; the unruly, untrimmed black hair, the short, thick beard which was unneeded on a chin and jaw as big and square as Joel's, the careless, unmilitary carriage of his thick shoulders and blocky body, the blood-shot metal-blue eyes themselves. But during the split-second the gaze was upon them, they knew pages were flipping in Joel's massive head. Pages of regulations, procedures, memorized down to the last foot-note.

"Let's go in order with your reports," Joel snapped.

Southard stepped forward. "Constellation Boötis, Arcturus, planet IV. Preliminary analysis of ore-samples indicate rich lodes of mneurium-4, relatively close to the surface, and in unprecedentedly great number. Purity is unbeliev-

ably high, with—"

"All right, Southard, good report. Dobermann."

"Minimum of linguistic difficulty, coupled with a surprisingly high aptitude on the natives' part for language learning. In the seventeen days I had with them, I'm almost certain those with whom I worked learned at least half as much English as I did of their tongue," the German said. He added, simply, as though the seventeen days of exhausting gesticulating, diagramming, systematizing, learning, recording, had never existed, "There will be no language difficulty, sir."

"Good. Now you, Sam, and no shmaltz!"

"Healthy people, no cancer, no TB, no coronary troubles—"

"The mneurium-4, I know. Go on."

"Average IQ in the 120's—and there's something for us to keep in mind in spite of our big technological and scientific jump on them. They're still working with wood, iron and crude steel, but they won't be for long. Agrarian civilization so far; they've got a representative type of government—democracy, and a damn good one, and they're psychologically suited for just what they've evolved along that line. They actually practice what they preach, from the individual status right on up through the framework of their government. Open, honest, sincere—they have to be, because of the high degree of uniformity of IQ, and because—now get this—they *want* to be. It's the way their minds are built, and—"

"All right, so if I believe you, we won't be fighting to get what we want. They're willing to meet our

terms, that it?"

"Yes, skipper. Access to all scientific data with which we can supply them now, and as much more later as they think they'll require, in exchange for reasonable mining rights."

"*Reasonable?*" Joel thundered. He slammed the heavy bottle down on the old-fashioned mahogany desk at his elbow. "Was *that* in the contract you made with them? How do you know what the hell they mean by reasonable?"

"Sir, if I may—"

"All right, Dobermann, go ahead and enlighten me."

"I worked a number of hours with them on that point, to make certain there would be no errors in the semantics involved. They have learned, despite their lack of scientific medical knowledge, that as long as there is mneurium-4 around, they don't get sick. They trust us to leave enough to insure their own well-being."

"That's crazy," Joel shot back at his first officer. "How in God's name can they know about mneurium-4 and how to use it when we've only known about it and have been scratching the universe for it for less than thirty years? That's goddam nonsense—" He refilled the flagon, spilled a little of the potent liquor on his beard as he downed it.

"No, Nicholas," Sam said. "You're the bug on history around here. Think a minute."

Joel drew a sleeve across his mouth, and pages flipped in his head again. Yes, Sam was right. Back as far as the twentieth century, there had been isolated tribes in South America which had been found free of the diseases that had

plagued their more civilized neighbors of the north, and it had taken the medical experts years to find out exactly why. Invariably, the answer had been usage of the most promising materials provided by nature which were closest at hand. A tribe stumbled onto something, used it—experimentally at first, then wastefully, but finally, with a thousand years' practice, pretty efficiently. And it had nothing to do with the fact that they still went around with spears and animal-hide shields. . .

"All right, I get your point, Sam," Joel said. Sam quit talking, and for a moment there was silence in the limited confines of the fore-waist bridge. Then Joel put the bottle and the flagon down on the desk, turned his back to it and faced them.

"From the way you boys talk this thing up, it all must be just jim-dandy. Maybe better than on that rock back in Aldeberan, or even better than we did in Altair, or Fomalhaut, or Procyon Seven, or any of the rest of 'em. . ." He paused again, watched their faces. They remembered—all except Southard, who hadn't been with them on any of the old strikes. But his youthful enthusiasm just about made up for the fierce pride that shone in the eyes of the others.

BACK HOME, the *White Whale*, of all of Earth's great fleet of Explorer-class ships, had hung up the most enviable record. She had brought back rare elements known to men but unobtainable by them within the confines of their own tiny Solar System, or rare

life-forms, impossible to study effectively in their native habitats, or precious new data which were beyond the reach of the astronomer's observatory. It meant progress. It meant a living force in the universe, a force of learning and of knowing, which would tolerate no barrier, which would broach neither defeat nor ultimate conclusion. In short, it meant Man.

Nicholas Joel knew it, and he still hated space.

Since that first indoctrination blast out to the moon and back when he'd been a plebe—since that day that he'd realized for the first time how *big* it was. And how big men ought to be, but weren't. Big muscles, but little minds. . .

He still wondered just how the hell they'd sucked him in. They'd hit him somewhere inside, in a place he'd forgotten to guard—his instructors, his Commandant, the Secretary of Science himself. They'd sweet-talked him into staying those twelve years. Young man, they had told him, yours is a body and a brain with an adaptability to space exploration the like of which has never been duplicated in our records. You hate to fly, yet you are the best cadet pilot ever to enter the Academy. You dislike technical and scientific study, yet your grades in this field are the highest on record. You despise the regimen of the military necessary to survival in Space, yet, unaccountably, your cadet commands have been the most efficient and best handled of any in our knowledge.

Young man, they had said, here's the works on a silver platter—be a pilot—you owe it to yourself, to the world, to humanity!

Say you'll take our ships where no other man would dare, and you can write your own ticket for the rest of your life! *But you simply have to be a Pilot, young man. . .*

And he remembered how it had been with Sam, who would have moved the Earth with arms and legs tied behind him to have qualified. Sam, who had hungered for it, but had taken a lesser assignment cheerfully, just so, at least, he could be a part of some other pilot's team in space.

Sam, who had that look in his eyes.

But since his assignment to the *White Whale* fifteen years ago, there had never been a sign—not the slightest, that Joel had been able to detect, that he was doing anything but what he most wanted. That took guts, and guts. Joel understood.

And so now they'd hit it again. Mneurium-4, the "wonder-element" that science had discovered would put a host of Earth's most dreaded diseases to rout, but which it had not been able to obtain or synthesize despite years of exhaustive effort.

Captain Joel, they had told him, the radio-astronomers say there could be mneurium-4 somewhere out in Boötis. Get some.

And in spite of them and their damned passion for onward-and-upward, if they insisted he pilot space to bring them back one new gew-gaw after another to play with, then he'd bring them back gew-gaws until they choked! *Choked!*

And the world he wanted—the world he'd always wanted, would just have to be for somebody else.

Then he looked at their faces,

and they were waiting.

"All right, I get your point! Don't just stand there—Southard, get your 'copters going! I want a fully plotted area of operation for the next six months, including jump-off point as of tomorrow at 0600 hours, and on this desk by 2200 tonight! Dobermann, you won't have anything to do for awhile, so you can get Southard's servodrillers going for him; get 'em all out, form 'em on the port flank in details of five. I want to see it by 2100. Sam, has Dobermann given you any practice in their lingo? Good—all right, it's time I met 'em—you'll take me to their capital city or wherever it is their top people are and we'll get things down in black and white. I'll be ready for you in twenty minutes. Any questions?"

There weren't. Joel's three officers turned and left, each scrambling to his new assignment, glad to actually get started before something happened to upset the unexpected simplicity of the whole thing. There'd never been a mission that had come off as smoothly as this one was beginning. It promised to make them feel guilty to draw their pay checks for it. For once, it looked as though Joel was going to get what he came after without having to fight down to raw nerve and bone to get it. Good. The Captain had an easy one coming.

When they'd gone, Joel dropped his great frame into the ancient chair behind his big desk and got to work with the ship's intercom, flipping it to main circuit. He did ten minutes' talking in six, and Phase One was organized, down to the last ship's guard, down to the

last assistant servomech.

Then he had fourteen minutes until Carruthers was due, ready to drive him to meet these people in their cultivated forest.

So for every one of the fourteen minutes, Captain Nicholas Joel leaned back in the chair, shut his eyes tight, and filled in a little more of the world he wanted.

THE ROADS were of hard-packed dirt, but level, and wide. Occasionally, as Sam Carruthers drove, they would pass through a hamlet, or go by small knots of men and women in carriages and wagons drawn by striped animals resembling Earth's African zebra. The farms were small but numerous, and none, Joel noted, had been entirely cleared; the trees had been thinned, and they were of a far more slender variety than grew elsewhere, but they had not been eliminated. It set well with him. Joel had always liked trees, and he had a feeling he was going to like other people who did to such an obvious extent.

Buildings, he noted, were almost entirely of wood; structures very similar to those he remembered having seen in a history text dealing with the western United States in the nineteenth century. A few were of stone, some of small, brick cubes; all were pleasing enough to the eye. And the people themselves were —

The people looked up as the jeep roared past; looked up from their work in the fields, looked out from their wagons and carriages, looked from their saddled mounts at the roadside. But there was no fear in

their glances, only the quick puzzlement of inquiring intelligence.

They were straight, well-bodied people, clothed simply in colorful garments which Joel assumed were made of cloth; the men were tall and broad and he could mentally picture the powerful muscles that rippled beneath their shirts. And the women—The women were the most graceful creatures he had ever seen, even those who were obviously no longer young; they were less fully clad than their men, and Captain Nicholas Joel liked that.

He liked it because it was honest. Where there was something beautiful, why in the name of anything holy or otherwise should it be covered up? That was the trouble with Earth and her people. There were too few things of real beauty, and when they did exist, humans seemed to have a psychotic compulsion for either ignoring them or hiding them completely. And those who did hesitate for a stolen moment's admiration were hurriedly hollered back to their jobs.

"You're surprised that they're not cluttering up the roads, trying to get a closer look at us?" Sam was hollering over the howl of the warm, oxygen-rich atmosphere.

"Good discipline," Joel grunted, still occupied with his own thoughts.

"Well, you're partly right. But more than that, we haven't stopped to look at *them*! It's sort of a half-courtesy, half-pride they have. They won't slow a stranger down if he doesn't slow them down, figuring that if he wanted to, he would; the prerogative is his. And, if he's not that interested, then neither are they!"

"You're sure some expedition didn't get here before we did?" Joel asked. "I mean—hell, they could be from Earth—"

"Ever hear of an Earthman with two hearts, skipper? But physically that's about the only difference I could find. Psychologically—" The Space surgeon hesitated.

"Psychologically what?"

"Take too long to explain—we're coming into the capital city you were talking about. And besides—" he grinned in a sidelong glance at Joel, "you might even have the brains to figure it out all by yourself."

"Go to hell!"

In a moment Carruthers was busy with the jeep, tooling it through narrowing streets, slowing it to almost a walk as men and women hastened out of their way, crowded the board sidewalks to allow them to pass unhampered. The buildings were much like those he had seen in the rural districts; a little larger, a bit taller, but none more than fifty feet in height. Neatly painted, their thin glass windows bright and clean, they did not look like part of a city at all, Joel reflected, much less part of a capital city. And everything was so quiet.

Maybe too quiet. He felt a little chill at the base of his spine, but kept looking straight ahead.

"You're sure, Sam, about leaving my guns back at the ship?"

Carruthers just grinned again. And then they turned abruptly, and hauled up in front of a long, low building of flagstone.

"This is it," the surgeon said. "No reporters, no photographers, no autograph seekers, no brass band or politicians. But you're on, Skipper."

CAPTAIN Nicholas Joel felt naked without his guns, and he felt off-balance and out of place. Standing in the sedate, oval-shaped council-chamber with these peaceful-looking people confronting him, he felt clumsy in his heavy black leatheroid uniform, big, highly-polished black boots. He felt as if he looked like what he'd been forced to be on other occasions, facing forms of life so alien that no difference counted—like a man-at-arms, like a conqueror.

Suddenly, he was glad Sam had made him leave his guns back at the ship.

"Nicholas Joel, United Americas Intergalactic Exploration Fleet, of the Ship *White Whale*, commanding!" Carruthers was introducing him in English, and he wished that Sam would have had the good sense to have said "This is Captain Joel" and let it go at that. Didn't the grinning idiot know it must have been an awful pill for these people to swallow all at once? That there were, to begin with, such things as other planets and other galaxies—and that there were, even more incredibly, other creatures that lived on them. And, whether they cared to believe it or not, some of these creatures had just landed among them, and there was nothing they could do about it!

Sam was picking his way along now in their speech, and then at an obvious gesture, Joel knew he was being introduced to their top man. Sam waved an arm toward the tallest of the twelve-man group, who arose from the opposite side of a polished wooden table, and bowed gently from the waist.

"His Excellency and Prime Gov-

ernor, K'hall-ik'hall."

Joel hesitated, then returned the bow. He had never bowed in his life, but a salute to somebody dressed in civilian clothes seemed crazy.

"Sam, you mean he's Prime Governor of—"

"The whole planet."

"Am I always supposed to say his name twice?"

"That is his name. That's the way they do it. Now shut up, Skipper, and let me do the talking. I'm going to go through the whole works again with 'em. Then we sign. Then you get a tour of the town so the people can be introduced to you officially. But don't go making any speeches! Behave, and we're in business."

"You go to—"

But Sam had already started talking in the liquid-sounding language, and Joel decided it was better for him to keep his own mouth shut and be thought stupid than open it and remove all doubt. Damn it, the whole thing was making him feel just the way he had twenty years ago, when he landed his first explorer on an alien world! It had been that long, and how many hundred meetings with alien life-forms since then, under how many fantastic circumstances, on how many God-forsaken, unworldly places? By now he was supposed to know the score. By now he was supposed to have seen everything. By now he knew the book inside and out, and had the ability to take charge no matter where in the black universe they sent him. Nicholas Joel, United Americas Inter-galactic Exploration Fleet, of the Ship *White Whale*, command-

ing . . .

But nobody was challenging his right to have what he'd come for!

No *trouble*, that was the hell of it, and—and there was nothing to hate.

For a miserable moment, Captain Nicholas Joel stood becalmed, with not so much as a breeze in his sagging sails.

But he would not let them know it. He looked levelly into the eyes of each of the twelve, but even that did little to make him feel more at ease.

For he saw wisdom in the lined, kindly faces. He saw a humility and sincerity that matched the simple clothing they wore. He saw a kindness that men talked about in books and sometimes felt in their hearts, but seldom held openly in their faces for the world to see. These men were handsome in their physical stature, but they could have been little men three feet high, and they would have been the biggest that Joel had ever seen.

Now they were talking in subdued tones to Sam, and then one produced a document, and handed Sam a slender writing stylus.

"Hey Sam—" The hoarseness of his voice unnerved him, but Joel plowed ahead. "Hadn't you oughtta read that thing?"

"It's already been read, Skipper. By Dobermann. It took him three days to draw it up—he did most of the writing himself. It's already been electrostated; we've got ten copies of our own. Now keep your mouth shut or they'll think we don't trust them. You sign first, because you're the guest. Then K'hall-i-k'hall, and it's all over."

Sam's thin face had a seriousness

in it that Joel knew he did not dare question. *The trouble is, the thought stung him, you doubt, because you were born and raised on Earth. Sam knows that. And he knows how these people think. And he says sign . . . So sign, you big boob.*

Silently, Joel took the stylus from Sam, bent quickly over the papyrus-like document, and put his name, rank and ship where Sam pointed. Then he gave the stylus to Sam, who returned it to K'hall-ik'hall. And in another instant, all the mneurium-4 the *White Whale* could lift clear was theirs for the taking.

ONCE HE'D put his mind to it, Joel could converse in the language of his hosts as fluently as either Dobermann or Carruthers, and within a month he had been able to finish a limited round of visits to a full dozen of the smaller cities and towns. These people had respected his wish that he be allowed to roam their streets and public buildings without official escort, and with an ever-quickenning fading of his self-consciousness, he did.

He did, more and more frequently.

And from the vantage point of their peacefully winding roads or their quaint little shops where they dispensed a fluid amazingly similar to Martian Colony Bond, Joel could hate the *White Whale* from a comfortable distance, and with a healthy, untiring diligence. This he also did, more and more frequently.

It was during one of these self-assigned off-duty periods, alone in his personal jeep, that his most re-

cent pint of Bond decided to harass him, and he discovered almost too late that he had ignored a turn of the dirt roadway. He skidded wickedly, and frightened one of the zebra-like animals drawing a vehicle much resembling a four-wheeled surrey. The animal let go with a terrified whinny, and with a sickening splintering noise, the *dhennah* went plunging off the road into the deep drainage ditch at its edge. There was also another sound, and Joel practically stood the jeep on its nose slewing it to a stop.

By the time he was out and running back, the frightened animal had gotten itself out of the ditch and was working frantically to bring the *dhennah* out after it. But the vehicle was canted at a crazy angle, and it was obvious to Joel that at least one of its starboard wheels was broken, and that it would take more than one *kaelli* to haul it out.

None of this, he reflected as he ran, was going to help diplomatic relations a bit. And he was no Dobermann. But it was none of these things that worried him at the moment.

She was screaming bloody murder, and still was hard at it when he jumped into the ditch.

She stopped when he clambered up on the steeply tilted narrow seat to which she clung. There was suddenly not a sound from her as his big hands circled her waist and gently lifted her to the ground.

Then he discovered that his voice was stuck. Dammit, an explorer captain for over fifteen years, and he didn't know what to say when he banged up some farm girl's

dhennah!

"I—ah, am terribly sorry. It will be replaced, of course. Very stupid and clumsy of me. I—ah, you hurt?" Rather smooth, at that!

She smiled. Slender lips, golden-colored eyes, delicately contoured face—all seemed to smile together. A breeze ruffled her tawny mass of shoulder-length hair, and Nicholas Joel just stood there.

"You are forgiven, the *dhennah* was not a costly one. I know how difficult it must be for you to guide those machines of yours at such terrible speeds . . . but of course the speeds are necessary to you in your work. Thank you for helping me."

Joel reassured himself that if only the conversation were in his mother tongue, he would of course not feel so ridiculously at a loss for words. After all, this young female was only an—an alien being.

"It was my pleasure, of course," Joel said. He thought perhaps if he could manage a smile—"I am gratified that you accept my clumsiness with such excellent grace. As intruders to begin with, my men and I—"

"Intruders, sir?" She had taken a few steps away from him to stroke the neck of the *kaelli* and quiet it, but she was still looking at him. "Why intruders? At one time, all the people of this world were not of one great community as they are now, surely you know that. But when one group travelled and visited another, no one thought of it as an intrusion." She laughed. "Are we all not one under the sun?"

"But they were of your own kind, from elsewhere on your own planet—"

"A visitor is a visitor," she said, as though suddenly puzzled. "What can it matter where he is from?"

Joel started to reply, but checked himself. Of course these people had no way of knowing. Of course they were still under the impression that intelligent life, wherever it might exist, would necessarily be in their own form. The fact that it might not be had never occurred to them! Then that was why they had not feared the *White Whale* and her crew. It was something Carruthers had probably perceived at once, something he could no doubt explain. But now Joel was seeing it first-hand for himself. Psychologically, this girl and her people were incapable of conceiving a way of life based on different reasons for living than their own, with different motives, different—ambitions.

Just, he reflected, as his own people were psychologically incapable of greeting a stranger without subconscious suspicion.

To these people, a visitor was—a visitor, and therefore a friend!

He wondered how many others beside himself, Carruthers and Dobermann knew.

"Perhaps it does not matter at all," Joel said, and he was surprised at the gentleness in his voice. He had not felt it that way in his throat for a long time. Not for a terribly long time. "Now, if you'll let me help you with that harness, we'll free your *kaelli*, and see what can be done about getting you on toward your destination!"

Joel's big fingers started fumbling with the thick leather thongs of the *kaelli's* rig. The harness felt strange and confusing to hands disciplined to the limiting exactnesses

of servocircuits and pressure-control studs, and the complexity of their co-ordination was thrown into confusion by sheer simplicity.

The girl laughed as she watched his efforts, then guided his hands with her own, and Joel felt a strange warmth mounting in his neck. And when the *kaelli* was at last freed, he said, "Now then, where can I take you? I owe you something more than just the replacement of your *dhennah*. I shall drive slowly so that the *kaelli* can follow, and you can see for yourself what it is like to ride in one of our machines!"

"But—they go like the wind!"

"Indeed they do!" Joel laughed, unaccountably pleased with her excitement. "Yes, ma'm, just like the wind!"

Quite unexpectedly, she reached for his hand, and Joel clasped hers with a quickness he had not intended. But then he was leading her to the jeep, helping her into it.

He started the powerful turbine engine, chuckled aloud at her quick gasp, then joined in her laughter.

"Just like the wind!" he cried and they were off.

The day was clear and bright and to Joel the air itself seemed to come alive with a heady excitement. This was something, it told him. This was not to hate. This was not to drink in bitterness. This was *not* to be alone.

CAPTAIN Nicholas Joel paced the fore-waist bridge. There was a full, untouched flagon on the mahogany desk, and the bottle of Martian Colony Bond stood, tightly corked, beside it.

He sat down, hating the feel of the chair of command beneath his big body.

What he was thinking was wrong, of course. But no man could be two men; a man could not split himself down the middle and say: this is your life *here*, this is your life *there*, for it is unthinkable that a man be prisoner of one life only—No, a man could not do that; a man had only one life.

Wrong, was it?

And who, any more a man than himself, could dare to be judge?

He would call Carruthers; he would explain, and Carruthers would inform the rest. As for Command—

A buzzer roared on the desk in front of him. It was the dispatch unit communicator—it would be Southard.

A huge forefinger hit the toggle almost hard enough to wrench it from its socket.

"Command!" Joel grated into the sensitive pick-up. "Proceed with your message." He reached for the flagon, drained it, filled it again.

"Lieutenant Southard calls Command from Servogroup 4." The youngster's voice sounded tight, excited. Now what the hell—"Request task mission. Request task mission. Position—"

Joel quickly jacked in the ship's armory circuit. An alarm klaxon would be electrifying the entire complement of combat personnel stationed in that quarter of the ship even as armory communications was taking down the co-ordinates Southard was dictating. And within one minute and forty-five seconds after that, combat units would be assembling in machine-like preci-

sion, deploying into advance order at the ship's stern.

And as the two huge sections between the *White Whale's* slender atmosphere fins opened like hungry steel mouths, disgorging flat, thick-bodied machines with their grim burdens of armed men and destroyer-artillery. Ship's Guard would be taking up defense positions, manning gun stations which commanded an energy potential sufficient to destroy a minor planet in a single, searing second of blue-white heat.

All this was automatic. A dispatch-unit request for task mission was an order, momentarily transcending even Command authority. It worked that way because the men who travelled space had learned that with the first foot they rose off the surface of Earth, theirs was no longer the privilege of living, but the task of survival. Space was emergency. And if you regarded it otherwise, it would kill you.

Joel waited. He watched only the sweep second hand on his desk chronometer; he did not need his screens, for he knew too well what was transpiring three hundred and twelve feet below him. He had seen it too many times. And too many times had he waited the necessary two minutes, listened to the taut silence of the waiting communicator.

"Command to Southard. Task mission dispatched and advancing. Now describe your situation."

"As follows—" The young lieutenant's voice was still taut, but it was not at the edge of panic. Of that Joel was certain. It was just that this was the first time, and it

wasn't a field exercise, and it hadn't just been learned the night before from an Academy manual . . .

"Servounit 4, sample tapping with four facilities at two hundred feet. Metal encountered; processed. Object depth-screened; fabricated. Extends from minus two zero zero to minus five two seven. Diameter three zero feet. Further investigation withheld pending arrival of task mission. Over for Command."

Over for Command, the young voice said. So many, many times . . .

He was not exactly the same Nicholas Joel, now. He was Command . . .

"All right, boy, sit easy and try to relax. What the hell is it you've got holed up out there?"

"It's a—a space ship, sir."

"What class?"

"I don't know, sir. It isn't Terrestrial."

"All right, what do the counters tell you?"

"It's about a thousand years old, sir. That's as close as the counters can come, working off a screen. Perhaps, sir, you'd—"

"Well I don't want to look at pictures! Inform task mission when they show up that I'm coming out for a look around—and I'll have their hides if they go unnailing things before I get there. You got any Bond with you, Southard?"

"Yes sir."

"All right, you get my point? Don't drink it all! This is Command, *Whale*, out!"

Joel broke the circuit just as the admittance buzzer went off; he thumbed a stud and the narrow bulkhead door slid back, admitting Carruthers and Dobermann.

"Was wondering when you two

were going to report. Sent a T-M to Southard—says he's found a space ship two hundred feet under the desert. Sometimes I think that kid works too hard. All right, got the 'copter ready?"

"Warming up on the waist ramp now," Dobermann said.

Joel stood up, reached for his guns and belt and strapped them around his thick middle. He gave Carruthers a quick look. The thin face was taut, almost expressionless, but there was an excitement smouldering in the dark eyes; the old excitement Joel had seen in them so many times before.

"No objections to the artillery this time, I take it, Sam?" Joel grunted as he clasped the big buckle, let the weight of the blasters sag their holsters down into position on his thighs. "Damn good of you! And I'm glad you understand these people so well—while we're on our way maybe you can tell me why they bury space ships."

"Maybe we ought to ask them, Skipper," Sam said with a half-smile on his thin lips.

"I get your point. But maybe they should've told us! Come on."

ON JOEL'S order, the task mission's guns had been reversed; drawn about the area where Southard's servounits were noisily sucking up sand, they no longer were concentrated on the excavation site, but instead defended it, slender snouts commanding an immense circular field of fire.

"You don't trust them at that, do you, Nicholas?" Carruthers said above the racket of the servounits. "Lord, you could slaughter an

army—"

"This is what it says to do in the goddamn books!" Joel snapped. "You're the guys who were so glad to make a strike."

The heavy, tracked machinery with its towering drill-housings and down-thrust vacuum-scoops whined and growled in a nerve-wrenching discord of power. Men sweated under the mild sun with a silent hurry, with a disciplined excitement.

Southard was fast and efficient.

Dobermann was silent, watching, analyzing.

Carruthers had the hungry look in his eyes that Joel did not understand.

And Joel was impatient. It was a tableau of men and machines that he had watched before, and always, at the end of it, there was something big for him to handle—frustrating if not dangerous, a mind and bone-wearying struggle if not an outright battle. They never came smooth, never.

"Forehull clear, sir!" It was Southard, calling from the lip of the immense hole his machines had excavated.

"Cut your servos!"

Southard signalled to his units, and they muttered slowly into silence, and then the silence hung over them all like a heavy thing, and Captain Nicholas Joel knew that what happened next was up to him.

With a motion of one gauntleted hand he brought Dobermann and Carruthers in next to him, and then the three of them walked with a disciplined haste to the sandy lip, past Southard, and looked down.

A pitted forehull jutted up out of the moist sand two hundred feet

below them, its plates glittering darkly in the rays of the powerful illumination units which had already been lowered.

Dobermann's quick eyes took in each detail in seconds, and then they darted up to Joel's face. Carruthers was silent, and his face was white.

"All right, let's get some winch-lifts over here!" Joel bellowed. "Torches, can-openers, let's get with it!"

And within minutes, Joel was on his way down in a bucket, big boots planted solidly on a small mountain of heavy tools.

Dobermann was following, and Carruthers was in the third bucket.

Joel's bare hands were exploring the gnurled lip of the fore-hull lock-hatch before either of them hit bottom. Dobermann was first up beside him, a heavy torch cradled in his short, thick arms.

"Ready?"

"Won't need that thing," Joel grunted. "Nobody locked up when they left. Give me a hand."

The hatch, like the rest of the hull, was pitted, but despite the moistness of the sand in which the ship was imbedded, there were no indications of corrosion. Joel made a mental note to have the lubricants in which the hinge-gymbals were packed analyzed later; they were still as good as new; the hatch was giving almost easily.

Carruthers, with an arc lantern, lit their way inside.

They walked into what was obviously a pilots' compartment. Instruments, control panels, ack-seats, notations on metal-leaf note-pads which they did not understand;

Dobermann copied them.

They descended ladder-walks into the fore-waist; crew compartment. Functional, compact, reflecting the same efficient engineering which they had encountered in the previous compartment.

Through a second bulkhead opening; supply compartment. Through another; cargo hold. It was not empty, and loading gear was in evidence, although neatly stowed in its locks.

"Mneuriun-4," Carruthers said. The words made a hollow sound in the emptiness behind them.

They kept going. Armory. All units still in place. Engine room. Dobermann's counter ticked slowly in the stillness. Still a little kick left in the piles. Machine-shop; lab. Spotless, perfect order. Finally, tubes. The smooth metal gleamed in the light of Carruthers' lamp.

And that was all.

Joel turned wordlessly and started back up the ladder-walks. Dobermann and Carruthers clanged hollowly after him, scrambling to keep up.

Joel didn't stop until he had climbed back into one of the buckets, and then he waved impatiently. Machinery whined above him, and his bucket swung clear.

At the lip, he motioned for Southard.

"All right, I want ten of your people with technical research rates. Leave them with Dobermann and Carruthers. Issue return orders to your T-M, and then get these units out of here and digging up what we came after."

"But—yes sir."

Dobermann and Carruthers were at the lip, climbing out of their

buckets. There was a puzzled look, even on Dobermann's usually taciturn face.

"You two," Joel snapped, "will have a crew of researchers. Ten men. Take twenty-four hours and scrape the insides of this thing. Carruthers will report directly to me when you're finished. Dobermann, you'll nail K'hall-i-k'hall to a wall somewhere and don't let him down until you find out what became of whoever flew this tank."

He turned and walked away before anyone could protest.

CAPTAIN Nicholas Joel drained the flagon. He looked again at the faded image in the small, rectangular frame, finally returned it to the breast pocket of his tunic. Then he looked up across the mahogany desk at Carruthers and Dobermann.

"So," he said slowly, "so he told you he didn't know, did he?"

"Yes, Captain, that is what he told me. He was surprised about the space ship. He called the others in. There was the same reaction. They—"

Joel leaped to his feet. "Don't give me that!" he thundered. He grabbed at the bottle of Bond; spilled it as he poured. "You *know* he knows!"

"Captain, I was quite convinced."

"Quite convinced, quite convinced, were you . . . All right, Dobermann, get out of here. You find out anything, let me know. Sam, I want to talk to you. Go on Dobermann, *git!*"

Joel slumped back behind the desk as his first officer pivoted, left.

He tried a swallow from the flagon; fumbled at his tunic pocket for the small frame, extracted it; looked at it again. Then put it back a second time.

Carruthers sat down opposite him.

"You going to talk to me, Nicholas, or pass out before you get the chance?"

"All right, Sam." Joel got up, put the Bond back in its cabinet; emptied the flagon and put it in too. "I get your point. Only you listen. The crew of that ship was deliberately murdered. Cold-bloodedly murdered, and it isn't going to happen to us."

"I see." The ship's surgeon eyed the tips of his fingernails, then slowly looked up into Joel's red, swollen face. "Naturally, there wouldn't be any bodies around to prove your theory, would there, skipper? And no signs of struggle. We didn't see any. Of course, their guns *were* racked up pretty neatly—But it's all there in the report—" he waved a slender hand toward a roll of tape on the desk.

"Never mind your sarcastic technicalities! They were—"

"Nicholas, sit down. And listen."

"All right. But I *don't* get your point! And I don't want any of your double-talk! The trouble with you guys—"

"First of all, Nicholas, you know that crew wasn't murdered or anything of the kind. And you know, and Dobermann realizes that you know *he* knows, that K'hall-i-k'hall was lying in his teeth. And K'hall-i-k'hall knows *we* know it."

Joel lowered his eyes. "All right, Sam," he said. No, there hadn't been any use in trying to drum up

a bunch of tripe—no use in trying to fool Sam. He had known that from the start. But sometimes—sometimes, even when a man knew he was fooling himself, he had to give it a try, just to see—“They went native, didn’t they, Sam?” he said.

“Yes, Skipper. They did. Somebody back where they came from needed that mneurium-4 real bad. Somebody had guts and sweat and brains enough to get ships into space looking for it. And in their own way, somebody had faith enough to think they’d get it if it was to be found. Only, as you say—”

“Liked it here, I suppose. Liked it better than anything they’d ever seen before—and that can of theirs had a thumping set of drives, so they’d seen plenty.”

There was silence for a moment. And then Sam said, “Well, Nicholas, there it is. The psychology of the thing is obvious enough, isn’t it?” Carruthers gave him a meaningful look, and Joel’s nerves rebelled at it.

“All right, I get your point!” A big fist slammed down on the desk-top. “So somebody didn’t get their mneurium-4! Somebody probably ornery enough to keep on living anyway. What do you want to bet they’re still going strong, who or wherever they are out in that black hell up there? What do you want to bet, Sam?”

The surgeon’s thin lips smiled gently. “I’d bet right along with you, Nicholas. They’re probably still going strong. I imagine they made out.”

“But K’hall-i-k’hall—”

“Is proprietor of a very pleasant

world. A world of very nice people, Nicholas, who enjoy living in their way, and get a kick out of seeing other people enjoy it. They think a little differently than a lot of folks.”

“That makes ’em bad, I suppose?”

“No.”

Joel looked into the thin face, the intent, dark eyes. The look was in them.

And Joel guessed he was finally letting himself realize what the look really meant.

It was a look that meant a hunger for all that Joel hated, and more. . .

It was a look that meant, even now after all these years, that Sam still hurt inside, and hurt badly.

“Why—why couldn’t it have been the other way *around*, Sam,” Joel said hoarsely.

The other looked up at him. “You do hate it that much, don’t you.”

“Look Sam, you’ve gotta get my point! I don’t think that crew did anything wrong! They didn’t. They just decided to stop being hunks of machinery.”

Carruthers smiled. “I get your point, Skipper. And I’m going to let you figure this one out all by yourself. But I’d like to tell you something first, just sort of as a point of information; maybe it’ll help. Skipper, I had a girl once, too.”

Joel stood still. Then he turned, opened his mouth to speak, then clamped it hard shut.

“They told me I couldn’t pilot. But I could help, and my help was needed—everybody’s was, because this wasn’t a matter of a govern-

ment project. This was a matter of a race of people who were building a ladder—a big, tall ladder, Nicholas. Sometimes it was a killer. Sometimes a heartbreaker. Sometimes a laughingstock. *But it belonged to men, and they lived and died for it; they built it, and it's theirs to climb, Nicholas!*"

Joel watched the other's worn face, and now the hurt was naked in it.

"She said, Nicholas, that it was all off if I decided to go up to space. I loved her, Skipper. *And I loved the tall ladder.*"

Joel whirled. "Sure, and what's it got us, Sam? A bellyful of cold, aching loneliness—our guts twisted and squeezed until the life's dried up in 'em—and what do we get? What do those wrangling, yapping, bellyaching rotters back home give us for it? Pension us off when we can't see our blast-off studs anymore and forget about us.

"They take the stuff we bring 'em—just as if it grew on trees, just as if it grew into a neat, pretty package somewhere all by itself! With money they can buy it—with enough money they can buy all of it! Even if we had to get it with the air sucked out of us, with our brains boiled out of us, with our crazy heads busted in.

"And you know what, Sam? There was even a time when they said we couldn't do it at all! A hundred years ago, they laughed at us for trying to get to the moon! They laughed, Sam—and those who didn't laugh *didn't even give a damn at all!*

"So I was to tell the girl I'd marry her later, but that right now they thought I ought to be a pilot!

I was to say to my life: I'll live you later, but right now I've got to be a pilot. . . And I was to freeze my insides for twenty years showing 'em they were wrong to laugh, and that it was time they gave a damn, that what I could bring home was going to mean a lot to the world they live on!

"And like a fool I did!

"And Sam—Sam, they're still yapping like little dogs for a piece of meat—not just a good piece of meat, but all wrapped up nice and fancy, no mistakes allowed, every time they whistle! And the whistling gets so easy, Sam—so easy. You can even do it while you're stabbing your neighbor in the back, while you're selling his kids down the river—even while you're taking your next breath to yap some more!

"They can go to hell, Sam! They can go to hell."

Joel slumped down in the chair behind the mahogany desk.

The surgeon looked at him, looked away.

"You've made up your mind, then."

"That's right."

"I suppose Dobermann and I can get the ship back somehow."

"You'll make it."

"I guess we will. Unless the rest feel the way you do—and I know half the crew thinks this is quite a place. In which case, of course, I suppose they'll survive, back home, even without the mneurium-4—they have for a long time. But there is one thing."

"Yeah, yeah."

"These people are fine people, as you've—found out. You couldn't even replace that *dhennah.*"

"How did you—"

"They're swell folks, Nicholas, and always will be," the surgeon said softly, "and they've never built a thing, *and never will*."

"They don't know greed, because no one has ever achieved anything worth another's wanting."

"They don't know jealousy, because no one has ever obtained anything that another couldn't."

"They don't know hate, because no one has ever discovered a thing for which to fight that another thinks of sufficient value to fight for."

"Only—if they don't know hate or jealousy, Skipper—then, *they don't know love!*"

Quietly, Carruthers rose from his chair. For a moment, he hesitated. "What is it you're lonely for, Nicholas?" he asked, and then he left the fore-waist bridge.

THERE WAS a mushroom of sun-fire against the blackness of the cool night, and a thunder of power.

Slowly, ponderously, the *White Whale* backed down her column of flame, hesitated, flared again for a final time from her thick stern, and then settled to Earth.

Gantries rolled into position. And the sound of lock-hatches clanging open thrilled the length of the *White Whale*, and there were the muffled voices of men, and the voices became shouts with the joy loud in them.

The men trooped down from their great metal monster as fast as the lifts would carry them, and in small groups and in crowds they made their boistrous way across the landing plaza and toward home.

And when the shouts had died, a last man descended the smooth sides of the *White Whale*.

His eyes glanced over the great bulk of her, making certain she was secure. Then he, too, walked from her, but not as quickly as the rest.

Captain Nicholas Joel walked slowly, because he was tired.

On every side of him, in dark shadow against the night, there were tall, slender, streamlined shapes pointing toward the stars.

His slow boot-steps echoed from their hulls as he passed, a tiny midge of a thing, between them.

As Sam had said, these were things that Man had made.

And among them again was the *White Whale*.

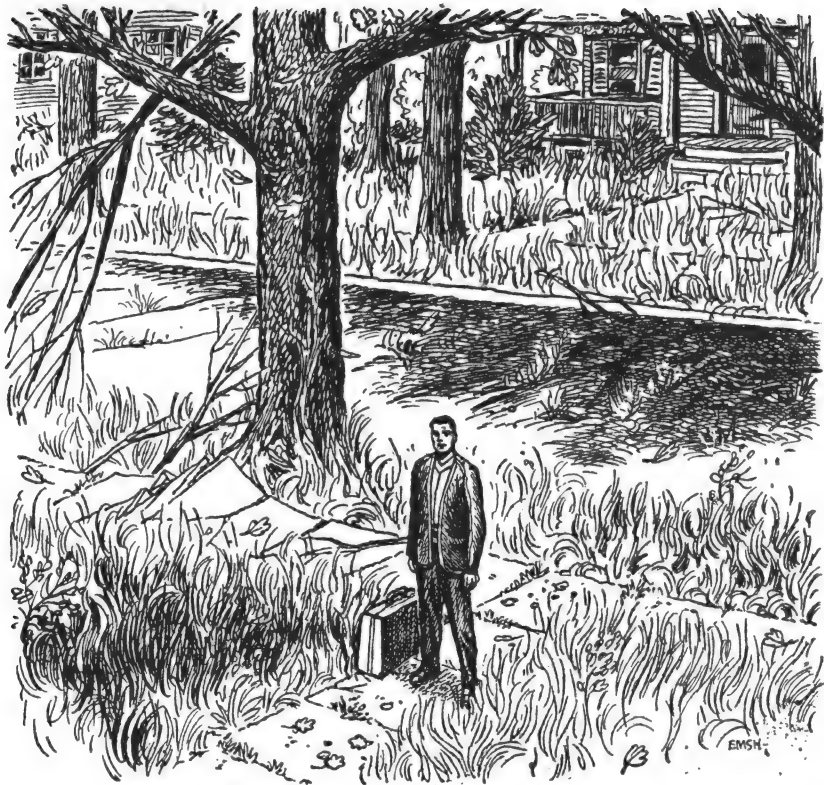
They had said he was a good pilot. ● ● ●

Who so clearly appreciates all that is implied in the falling of a stone can have no difficulty about any theory simply on account of its marvelousness.

—Thomas Huxley

Life is the uninterrupted progression of the past, which gnaws at the future, and swells as it advances.

—Bergson



Illustrated by Ed Emsch

Where there's a will there's a way; and love can be a powerful motive. But a hundred years of waiting for your man to come home requires something else . . . as in this legend of Philip and Miranda.

One Love Have I

BY ROBERT F. YOUNG

IT HAD BEEN one of those rural suppers, which were being revived at the time. Philip had just arrived in the little academic village that evening and he had just finished unpacking his clothes and his books. There had been nothing more for him to do till morning when he was due to report at the university, and feeling restless, and feeling a little lonely too (as he'd admitted to Miranda later), he had left the boarding house with the intention of wandering about the village till he was tired enough to sleep. He had hardly gone two blocks, however, before he had come to the brightly lit community hall where the supper was in progress, and strangely intrigued, perhaps motivated by the stirring of some pleasant racial memory, he had paused before the entrance.

Through the wide-flung doors he had seen the long table in the middle of the floor, and the food-laden tables, each with a girl in blue behind it, lining the walls. He had seen the men and women pass-

ing the food tables, carrying trays, and he had heard the clatter of dishes and the reassuring sound of homely voices. He had noticed the sign above the entrance then, and the simplicity of it had touched him: 77c COMMUNITY SUPPER—SQUARE DANCE TO FOLLOW. It had touched him and filled him with a yearning he hadn't experienced since he was a boy, and he had climbed the wide steps that led to the open doors and stepped into the hall. It was a warm night in September and the curtains at the big windows were breathing in a gentle wind.

He saw her instantly. She was behind the ham sandwich table on the opposite side of the room, tall, dark-haired, her face a lovely flower above the blue petals of her collar. The moment he stepped through the doorway she became the cynosure of the scene, and everything else—tables, diners, walls, floor—became vague extraneous details which an artist adds to a picture to accentuate its central subject.

He was only dimly aware of the other people as he walked across the room. He was halfway to her table, before she looked up and saw him. Their eyes touched then, her blue ones and his gray; touched and blended, achieved a moment apart from time. And he had fallen in love with her, and she with him, and it didn't matter what the Freudian psychologists said about that kind of love because the Freudian psychologists simply didn't know about that kind of love, about the way it was to walk into a room and see a girl and know instantly, without understanding how you knew—or caring even—that she, and she alone, was the girl for you, the girl you wanted and had always wanted, would want forever—

Forever and a day . . .

His hands were shaking again and he made them place a cigarette between his lips and then he made them light it. But when they had finished the task and the first pale exhalation of smoke was hovering in the little compartment, they were still shaking, and he held them tightly together on his lap and forced his eyes to look out the window of the monorail car at the passing countryside.

The land was a tired green, a September green. There was goldenrod on hillsides, and the tips of sumac leaves were just beginning to redden. The car swayed as the overhead rail curved around a hill and spanned a valley. It was a lovely valley but it wasn't a familiar one. However, Philip wasn't perturbed: the car was still too far from Cedarville for him to be seeing familiar places. He'd never

been much for traveling and it would be some time yet before he could start looking for remembered hills and forests, valleys, roads, houses—Houses sometimes stood for a hundred years. Not very often, maybe, but once in a while. It wasn't too much to ask.

He lay his head back on the pneumatic head rest and tried to relax. That was what the Deep Freeze Rehabilitation Director had instructed him to do. "Relax. Keep your mind empty. Let things enter into your awareness gradually, and above all don't think of the past." Relax, Philip thought. Don't think of the past. The past is past, past, past . . .

The car swayed again and his head turned slightly. The monorail bordered a spaceport at this point, but he had never seen a spaceport before and for a moment he thought that the car was passing through a vast man-made desert. Then he saw the lofty metallic towers pointing proudly into the afternoon sky, and presently he realized that they weren't towers at all, but ships instead.

He stared at them, half frightened. They were one of the phenomena of the new era for which he was unprepared. There had been spaceships in his own era of course, but there hadn't been very many of them and they had been rather puny affairs, strictly limited to interplanetary travel. They bore no resemblance to the magnificent structures spread out before his eyes now.

The Sweike Drive hadn't been discovered till the year of his trial, and he began to realize the effect it had had on space travel during

the ensuing century. In a way it was not surprising. Certainly the stars were a greater incentive to man than the lifeless planets of the home system ever could have been.

Alpha Centauri, Sirius, Altair, Vega—One of the ships had gone as far as Arcturus, the Rehabilitation Director had told him. It had returned scarcely six months ago after an absence of almost 65 years. Philip shook his head. It was data he could not accept, data too fantastic for him to accept. To him it belonged in a probability story, a story that you read with interest, then forget the moment you laid it aside.

He had always considered himself modern. He had always kept abreast of his age and accepted change as a part of the destiny of man. Scientific progress had never dismayed him; rather, it had stimulated him, and in his chosen field of political philosophy he had been far ahead of his contemporaries, both in vision and in practical application. He had been, in fact, the epitome of modern civilized man—

One hundred years ago . . .

Wearily he turned his eyes from the window and regarded the gray walls of the compartment. He remembered his cigarette when it nipped his fingers, and he dropped it into the disposal tray. He picked up the magazine he had been trying to read some time before and tried to read it again, but his mind stumbled over unfamiliar words, over outrageous idioms, faltered before undreamed-of concepts. The magazine slipped from his fingers to the seat again and he let it lie there.

He felt like an old, old man, yet,

in a subjective sense he wasn't old at all. Despite the fact that he had been born one hundred and twenty-seven years ago, he was really only twenty-seven. For the years in the Deep Freeze didn't count—a hundred year term in suspended animation was nothing more than a wink in subjective time.

He lay his head back on the head rest again. Relax, he told himself. Don't think of the past. The past is past past past . . . Tentatively he closed his eyes. The moment he did so he knew it had been a mistake, but it was too late then, for the time stream already had eddied back more than a hundred years to a swiftly flowing September current . . .

It had been a glorious day for a picnic and they had discovered a quiet place on a hill above the village. There was a cool spring not far away, and above their heads an enormous oak spread its branches against a lazy autumn sky. Miranda had packed liverwurst sandwiches in little pink bags and she had made potato salad. She spread a linen tablecloth on the grass, and they ate facing each other, looking into each other's eyes. A light wind gamboled about them, left ephemeral footprints on the hillside.

The potato salad had been rather flat, but he had eaten two helpings so that she wouldn't suspect that he didn't like it; and he'd also eaten two of the liverwurst sandwiches, though he didn't care for liverwurst at all. After they finished eating they drank coffee, Miranda pouring it from the large picnic thermos into paper cups. She had

been very careful not to spill a drop, but she had spilt a whole cup instead, on his shirtsleeve. She had been contrite and on the verge of tears, but he had only loved her all the more; because her awkwardness was as much a part of her as her dark brown hair, as her blue eyes, as her dimples and her smile. It softened the firm maturity of her young woman's body, lent her movements a school-girlish charm; put him at ease in the aura of her beauty. For it was reassuring to know that so resplendent a goddess as Miranda had human frailties just as lesser creatures did.

After the coffee they had reclined in the shade, and Miranda had recited "Afternoon on a Hill" and Philip had remembered some of Rupert Brooke's "The Old Vicarage, Grantchester". Miranda was in her final year at the university—she was twenty-one—and she was majoring in English Literature. That had put them on common ground from the start, for Philip had loved literature since the moment he had opened *Huckleberry Finn* as a boy, and during the ensuing years he had never lost contact with it.

He had been affecting a pipe at the time (a pipe lent you a desperately needed dignity when you were only twenty-six and commencing your first semester of teaching), and Miranda had filled it for him, holding his lighter over the bowl while he puffed the tobacco into ruddy life . . . It had been such a splendid afternoon, such a glorious afternoon, filled with September wind and September sunshine, with soft words and quiet laughter. The sun was quite low when they pre-

pared to leave, and Philip hadn't wanted to leave at all. Miranda had seemed reluctant too, folding the linen tablecloth slowly, being far more meticulous than she usually was when she folded things, and then picking up the bowl half filled with potato salad, intending to set it in the picnic basket. She didn't quite make the basket, however, for the bowl was large and clumsy and she was using only one hand. It escaped her fingers somehow, and overturned, and his lap was just beneath. That had been the last time he had ever worn his Madagascar slacks.

Her eyes had become so big and so round with dismay that he would have laughed if they had been anyone else's eyes besides Miranda's. You could never laugh at Miranda's eyes; they were too deep and too blue. He had only smiled instead, and said it didn't matter, and wiped his slacks with his handkerchief. Then he had seen her tears, and he had seen her standing there helplessly, tall and gawky, a child really, a lovely child who had become a woman a little too soon, and a beautiful woman too. And something within him had collapsed and a softness had spread all through him, and he had taken her into his arms and said, "Miranda, Miranda. Will you marry me, Miranda?"

The spaceport was far behind and the car was twisting through hills, humming on its overhead rail. It skimmed the treetops of a forest and passed high above a river. Looking down at the river bank, Philip saw his first familiar landmark.

It was nothing more than a pile of crumbled masonry now, overgrown with river weeds and sumac, but once, he knew, yesterday or a hundred years ago, it had been a public villa, and he had spent an afternoon on one of its sun splashed patios, sipping cocktails and idly watching the white flurries of sails on the blue water below. And thinking of nothing, absolutely nothing—

Except Miranda.

Desperately he forced her out of his mind. It had been all right to think of her a century ago. It wasn't now. He couldn't think of her now because thinking of her tore him apart; because he had a reality to face and if he thought of her the way she had been a hundred years ago he wouldn't be able to face it—he wouldn't be able to search for her in the Cedarville cemetery and put flowers on her grave.

The Rehabilitation Director had told him that in a way his sentence had been merciful, merciful by accident of course, and not design. It would have been far worse, the Rehabilitation Director had said, for him to have been sentenced for only fifty years and then to have gone home, a man of twenty-seven, to a wife who had just passed seventy-two.

But it was naive to speak of mercy, even accidental mercy, in connection with the age of the Congressional Regime. An age that could condemn a man to suspended animation, tear him forcibly from the moment in time where he belonged, to be resurrected decades later into a moment in time where he did not belong—an age like that had no mercy, had

no conception of the meaning of the word. Such an age was brutal, or more brutal, or less brutal; but it was never merciful.

And an age like the present one, while it had rediscovered mercy, was incapable of bestowing it upon a resurrected criminal. It could apologize to him for the cruelty of the preceding age, and it could remunerate him handsomely for the lost years, make him independent for life; but it could not give him back that moment in time that was uniquely his own, it could not bring back the soft smile and the unforgettable laughter of the woman he loved.

It could not obliterate a cemetery lot with a grave that had no right to be there, a grave that had not been there a subjective yesterday ago. It could not erase the words "Miranda Lorrington, b. 2024, d. 20—" or was it "21—"—he couldn't know of course, not yet, but he hoped she'd lived long and happily, and that she'd remarried and had children. She had been meant to have children. She had been too full of love not to have had them.

But if she had remarried, then her name wouldn't be Miranda Lorrington. It would be Miranda something else, Miranda Green, perhaps, or Miranda Smith; and perhaps she had moved away from Cedarville, perhaps he was going home for nothing. No, not for nothing. He'd at least be able to trace her from Cedarville, trace her to wherever she'd gone to live, find her grave and cover it with forget-me-nots—forget-me-nots had been her favorite flower—and shed a tear on some quiet afternoon, her

kiss of a hundred years ago a warm memory on his lips.

He got up in the gently swaying compartment and stepped over to the water cooler and dialed a drink. He had to do something, anything at all, to distract his mind. And the dial was so simple, so child-simple, requiring but the flick of his finger, and no thought, no attention. It could not interrupt the flow of his thoughts even briefly, and the cool taste of the water only gave the flow impetus, sent it churning through his mind, wildly, turning his knees weak, sending him staggering back to the seat, his grief a tight-packed lump swelling upward from his chest to his throat, and the memories, released, flowing freely now, catching him up and carrying him back to the light days, to the bright glorious days, back to his finest moment—

IT HAD BEEN a simple wedding. Miranda had worn blue and Philip had worn his academic dacr-
ons. The Cedarville justice of the peace had performed the ceremony, being very brusque about it, saying the words as fast as he could and even holding out his hand for the fee the moment he had finished. But Philip had not minded. Nothing seemed ugly to him that day, not even the November rain that began to fall when they left the justice's house, not even the fact that he had been unable to obtain leave of absence from the university. The wedding took place on Friday night and that gave them Saturday and Sunday; but two days weren't enough for

a trip, and they decided to spend their honeymoon in the little house Philip had bought on Maple Street.

It was an adorable house, Miranda said for the hundredth time when they paused before it in the rain. Philip thought so too. It was set well back from the street and there were two catalpa trees in the front yard, one on either side of the little walk. There was a tiny porch, latticed on each side, and a twentieth century paneled door.

He had carried her over the threshold, breathing a little hard, for she was quite heavy, and set her down in the middle of the living room. All of his books were there, on built-in shelves on either side of the open fireplace, and Miranda's knickknacks covered the mantel. The new parlor suite matched the mauve-grey curtains.

She had been shy when he kissed her, and he hadn't known quite what to say. Being alone together in their own house involved an intimacy for which neither of them had been prepared, despite all the whispered phrases and stolen kisses, the looks passed in the university corridors, the afternoons shared, and the autumn evenings walking together along leaf-strewn streets. Finally she had said, "I'll make some coffee," and had gone into the kitchen. The first thing she had done was to drop the coffee canister, and there was the coffee, dark against the gleaming floor, and there was Miranda, her blue eyes misted, lovely in her blue dress, a goddess in the room, his goddess; and then a goddess in his arms, soft-lipped and pliant, then warm and suddenly tight-pressed against

him, her arms about his neck and her dark hair soft against his face . . .

A village showed in the distance, between wooded hills. It was a deserted village and it had fallen into ruin, but there were remnants of remembered buildings still standing and Philip recognized it as a little town not far from Cedarville.

He had very few memories associated with it, so he experienced but little pain. He experienced fear instead, for he knew that very soon the car would be slowing, that shortly he would be stepping down to the rotting platform of the Cedarville station. And he knew that he would be seeing another deserted village, one with many memories, and he was afraid that he couldn't endure the sight of remembered streets choked with weeds, of beloved houses fallen into decay, of vacant staring windows that long ago had glowed with warmth and life.

The Rehabilitation Director had explained about the deserted villages, the emptying cities, the approaching desuetude of Earth. Interstellar Travel had given back the dream that Interplanetary Travel had taken away. Arid Venus and bleak Mars were uninhabitable, and the ice-choked outer planets weren't planets at all, but wheeling glaciers glinting malevolently in pale sunlight. Alpha Centauri 4 was something else, however, and Sirius 41 was a dream come true.

The Sweike Drive had delivered Man from the dilemma in which his proclivity to overproduce himself had involved him, and Earth was losing its population as fast as

ships could be built to transport colonists to the stars. There were colonies as far out as Vega and before long there would be one in the Arcturus system. Except for the crews who manned the ships, interstellar runs were a one way proposition. People went out to distant suns and settled in spacious valleys, in virgin timberlands, at the feet of unexploited mountains. They did not return. And it was better that way, the Rehabilitation Director had said, for a one way ticket resolved the otherwise irresolvable problem of the Lorentz transformation.

Philip looked out at the tumbled green hills through which the car was passing. It was late afternoon, and long shadows lay coolly in deep valleys. The sun was low in the sky, reddening, and around it cumulus clouds were becoming riotous with color. A wind wrinkled the foliage of new forests, bent the meadow grass on quiet hillsides.

He sighed. Earth was sufficient for him. The stars could give him nothing that he could not find here: a woodland to walk in, a stream to read by, a blue sky to soften his sorrow . . .

The tumbled hills gave way to fields, and the fields ushered in a vaguely familiar stand of cedars. He became aware that the car was slowing, and glancing up at the station screen he saw the nostalgic name spelled out in luminescent letters: CEDARVILLE. He got up numbly and pulled his slender valise from the overhead rack. His chest was tight and he could feel a throbbing in his temple.

Through the window he caught glimpses of outlying houses, of col-

lapsed walls and sagging roofs, of moldering porches and overgrown yards. For a moment he thought that he couldn't go through with it, that he couldn't force himself to go through with it. Then he realized that the car had stopped, and he saw the compartment door slide open and the metallic steps leaf out. He descended the steps without thinking, down to the reinforced platform. His feet had hardly touched the ancient timbers before the car was in motion again, humming swiftly away on its overhead rail, losing itself in the haze of approaching evening.

He stood without moving for a long time. The utter silence that precedes evening in the country was all around him. In the west, the wake of the sun was deepening from orange to scarlet, and the first night shadows were creeping in from the east.

Presently he turned and started up the street that led to the center of the village. He walked slowly, avoiding the clumps of grass that had thrust up through the cracks and crevices in the old macadam, ducking beneath the low limbs of tangled maples. The first houses began to appear, standing forlornly in their jungles of yards. Philip looked at them and they looked back with their sunken staring eyes, and he looked quickly away.

When he reached the point where the street sloped down into the little valley where the village proper lay, he paused. The cemetery was on the opposite slope of the valley and to reach it he would have to pass Maple Street, the community hall, the university, and half a hundred other remembered

places. No matter how much he steeled himself, he would experience the tug of a thousand associations, relive a thousand cherished moments.

Suddenly his strength drained from him and he sat down on his upended valise. What is hell? he asked himself. Hell, he answered himself, is the status reserved for the individuals of a totalitarian state who voice truths contrary to the rigid credo of that state; who write books criticizing the self-appointed guardians of mass man's intellectual boundaries.

Hell is what remains to a man when everything he loves has been taken away. . .

It had been a modest book, rather thin, with an academic jacket done in quiet blue. It had been published during the fall of the same year he had married Miranda, and at first it had made no stir at all. The name of it had been *The New Sanhedrin*.

Then, during the winter, it had caught the collective eye of that subdivision of the Congressional State known as the Subversive Literature Investigative Body, and almost immediately accusations had begun to darken the front pages of newspapers and to resound on the newscasts. The SLIB had wasted no time. It set out to crucify Philip, the way the high priests of the Sanhedrin had set out to crucify Christ over two thousand years ago.

He had not believed they would go so far. In developing his analogy between the Congressional State and the Sanhedrin, demonstrating how both guarded their supreme power by eliminating everyone who

deviated from the existent thought-world, he had anticipated publicity, perhaps even notoriety. He had never anticipated imprisonment, trial, and condemnation; he had never dreamed that a political crime could rate the supreme punishment of that new device of inhuman ingenuity which had supplanted the chair and the gas chamber and the gallows—the Suspended Animation Chambers popularly known as the Deep Freeze.

He had underestimated the power of his own prose and he had underestimated the power of the group his prose had censured. He had forgotten that totalitarian governments are always on the lookout for scapegoats; someone to make an example of, a person with few funds and with no political influence, and preferably a person engaged in one of the professions which the mass of men have always resented. Specifically, an obscure political philosopher.

He had forgotten, but he had remembered. He had remembered on that bleak morning in April, when he heard the puppet judge intone the sentence—"One hundred years suspended animation for subversive activities against the existent governing body, term to begin September 14, 2046 and to expire September 14, 2146. Gradien cell locks to be employed, so that any attempt by future governing authorities to alleviate said term shall result in the instant death of the prisoner. . ."

The months between April and September had fled like light. Miranda visited him every day, and the two of them tried to force the

rest of their lives into fleeting seconds, into precious moments that kept slipping through their fingers. In May they celebrated Philip's birthday, and in July, Miranda's. The celebration in each case consisted of a "Happy Birthday, darling," and a kiss stolen behind the omnipresent guard's back.

And all the while he had seen the words in her eyes, the words she had wanted to say desperately and couldn't say, the words, "I'll wait for you, darling." And he knew that she would have waited if she only could have, that she would have waited gladly; but no woman could wait for you a hundred years, no matter how much she loved you, no matter how faithful she was.

He had seen the words in her eyes in the last moment, had seen them trembling on her lips; and he had known what not being able to say them had done to her. He had seen the pain in the soft lines of her child-like face, in the curve of her sensitive mouth, and he had felt it in her farewell kiss—the anguish, the despair, the hopelessness. And he had stood there woodenly before the elevator, between the guards, unable to cry because tears were inadequate, unable to smile because his lips were stiff, because his cheeks were stone, and his jaw granite.

She was the last thing he saw before the elevator door slid shut, and that was as it should have been. She was standing in front of the Deep Freeze window and behind her, behind the cruel interstices of wire mesh, the blue September sky showed, the exact hue of her eyes. That was the way he had remembered her during the descent to the

underground units and along the clammy corridor to his refrigerated cell. . .

THE DAYS of dictatorships, whether they be collective or individual, are numbered. The budding dictatorship of Philip's day was no more than an ugly memory now. The Sweike Drive had thwarted it, had prevented it from coming into flower. For man's frustrations faded, when he found that he could reach the stars; and without frustrations to exploit, no dictatorship can survive.

But the harm small men do outlives them, Philip thought. And if that axiom had been true before the advent of the Deep Freeze, it was doubly true now. With the Deep Freeze man had attained Greek tragedy.

He lit a cigarette and the bright flame of his lighter brought the deepening shadows of the street into bold relief. With a shock he realized that night had fallen, and looking up between the tangled trees he saw the first star.

He stood up and started down the sloping street. As he progressed, more stars came out, bringing the ancient macadam into dim reality. A night wind came up and breathed in the trees, whispered in the wild timothy that had pre-empted tidy lawns, rattled rachitic shutters.

He knew that seeing the house would only cause him pain, but it was a pain he had to endure, for homecoming would not be complete until he had stepped upon his own doorstep. So when he came to Maple Street he turned down the

overgrown sidewalk, making his way slowly between giant hedges and riotous saplings. For a moment he thought he saw the flicker of a light far down the street, but he could not be sure.

He knew of course that there was very little chance that the house would still be standing—a hundred years is a long time for a house to live—that if it were still standing it would probably be changed beyond recognition, decayed beyond recognition.

And yet, it was still standing and it had not changed at all. It was just the same as it had been when he had left it over a hundred years ago, and there was a light shining in the living room window.

He stood very still in the shambles of the street. The house isn't real, he told himself. It can't be real. I won't believe that it's real until I touch it, until I feel its wood beneath my fingertips, its floor beneath my feet. He walked slowly up the little walk. The front lawn was neatly trimmed and there were two tiny catalpa trees standing in newly turned plots of ground. He mounted the steps to the latticed porch and the steps were solid beneath his feet and gave forth the sound of his footsteps.

He touched the print lock of the door with the tip of his ring finger and the door obediently opened. Diffidently he stepped over the threshold and the door swung gently to behind him.

There was a mauve-grey parlor suite in the living room and it matched the mauve-grey curtains on the windows. Pine knots were ruddy in the open fireplace and his books stood in stately rows on the

flanking built-in shelves. Miranda's knickknacks covered the mantel.

His easy chair was drawn up before the fire and his slippers were waiting on the floor beside it. His favorite pipe reposed on a nearby end table and a canister of his favorite tobacco stood beside it. On the arm of the chair was a brand new copy of *The New Sanhedrin*.

He stood immobile just within the door, trying hard to breathe. Then he superimposed a rigid objectivity upon the subjective chaos of his thoughts, and forced himself to see the room as it really was and not as he wished it to be.

The lamp in the window was like the lamp Miranda had kept in the window a hundred years ago, but it wasn't the same lamp. It was a duplication. And the parlor suite was very much like the one that had been in the room a hundred years ago when he had carried Miranda over the threshold, and yet it wasn't quite the same, and neither were the curtains. There were differences in the material, in the design—slight differences, but apparent enough if you looked for them. And his easy chair—that was a duplication too, as were his slippers and his pipe; *The New Sanhedrin*.

The fireplace was the same, and yet not quite the same: the pattern of the bricks was different, the bricks themselves were different, the mantel was different. And the knickknacks on the mantel—

He choked back a sob as he walked over to examine them more closely, for they were not duplications. They were originals and time had been unkind to them. Some of them were broken and a patina of

the years covered all of them. They were like children's toys found in an attic on a rainy day. . .

He bent over his books, and they were originals too. He pulled one from the shelf and opened it. The yellowed pages betrayed the passage of the years and he replaced it tenderly. Then he noticed the diary on the topmost shelf.

He took it down with trembling hands, opened and turned its pages. When he saw the familiar handwriting, he knew whose diary it was and suddenly his knees were weak and he could not stand, and he collapsed into the easy chair before the fire.

Numbly he turned the pages to the first entry. It was dated September 15, 2146—

I walked down the steps, the stone slabs of steps that front the tomb in which men are buried alive, and I walked through the streets of the city.

I walked through the streets, the strange streets, past hordes of indifferent people. Gradually I became aware of the passing hours, the fleeting minutes, the swift-flying seconds; and each second became an unbearable pain, each minute a dull agony, each hour a crushing eternity. . .

I do not know how I came to the spaceport. Perhaps God directed my footsteps there. But the moment I saw the shimmering spires of the new ships pointing into the September sky, everything I had ever read concerning the Sweike Drive coalesced blindingly in my mind, and I knew what I had to do.

A clock which is in motion moves slower than a stationary clock. The

difference is imperceptible at ordinary velocities, but when the speed of light is approached, the difference is enormous.

The Sweike Drive approaches the speed of light. It approaches the speed of light as closely as it can be approached, without both men and ship becoming pure energy.

A clock on a ship employing the Sweike Drive would barely move at all—

Not daring to believe, he skipped a page—

September 18, 2146—They tell me it will take two years! Two of my sweet, my precious years to become a space-line stewardess! But there's no other way, no other way at all, and my application is already in. I know they will accept it—with everyone clamoring for the stars the need for ship's personnel is—

His hands were shaking uncontrollably and the pages escaped from his fingers, days, months, years fluttering wildly by. He halted them finally—

June 3, 2072 (Sirius 41)—I have measured time by many moving clocks, and moving clocks are kind. But when planetfall arrives, stationary clocks take over, and stationary clocks are not kind. You wait in some forsaken port for the return run and you count each minute and resent its passage bitterly. For over the decades, the minutes add together into months and years and you are afraid that despite the moving clocks, you will be too old after all—

The pages escaped again and he stopped them at the final entry—

February 9, 2081—Today I was officially notified that my application for the Arcturus run has been accepted! I have been in a kind of ecstatic trance ever since, dreaming and planning, because I can dream and plan now! Now I know that I shall see my beloved again, and I shall wear a white gardenia in my hair, and the perfume he likes the best, and I shall have our house rebuilt and everything in it restored—there'll be plenty of time if the 65 year estimate is correct; and when my beloved is released I shall be there waiting to take him in my arms, and though I shall not be as young as he remembers me, I shall not be old either. And the lonely years between the stars shall not have been in vain—

For I have only one love. I shall never have another.

THE WORDS blurred on the page and Philip let the diary slip from his fingers to the arm of the chair. "Miranda," he whispered.

He stood up. "Miranda," he said.

The house was silent. "Miranda!" he called. "Miranda!"

There was no answer. He went from the living room to the bedroom. The bedroom was the way it had been a hundred years ago except that it was empty now. Empty of Miranda.

He returned to the living room and went into the kitchen. The kitchen was the same too, but there was no Miranda in it. He switched on the light and stared at the porce-

lain sink, the chrome stove, the white cupboards, the gleaming utility table—

There was a hand mirror lying on the table, and beside it was a crumpled gardenia. He picked up the gardenia and it was cool and soft in his hand. He held it to his nostrils and breathed its fresh scent. There was another scent mingled with it, a delicate fragrant scent. He recognized it immediately as Miranda's perfume.

Suddenly he could not breathe, and he ran out of the house and into the darkness. He saw the light flickering at the end of the street then, and he walked toward it with unbelieving steps. The community hall grew slowly out of the darkness and the light became many lights, became bright windows. From somewhere in the surrounding shadows he heard the humming of a portable generator.

When he climbed the steps a hundred years flew away. There was no 77c supper of course, and the hall showed unmistakable signs of age, despite the fact that it had been recently remodeled. But there was Miranda. Miranda standing by a lonely table. Miranda crying. A more mature Miranda, with lines

showing on her face where no lines had showed before, but light lines, adorable lines. . .

He realized why she had not met him at the Deep Freeze. She had been afraid, afraid that the moving clocks had not moved slowly enough after all; and she must have decided to meet him at the house instead, for she knew he would come home. She must have heard the monorail car pull in, must have known he was on his way—

Suddenly he remembered the mirror and the crumpled gardenia.

Silly girl, lovely girl— His eyes misted and he felt the tears run down his cheeks. He stumbled into the room, and she came hesitantly forward to meet him, her face beautiful with the new years. A goddess in the room, a mature goddess, the awkwardness gone forever, the schoolgirlish charm left somewhere in the abysses between the stars; his goddess—and then a goddess in his arms, warm and suddenly tight-pressed against him, her dark hair soft against his face, her voice whispering in his ear, across the years, across the timeless infinities, "Welcome home, darling. Welcome home." ● ● ●

False facts are highly injurious to the progress of science, for they often endure long; but false views, if supported by some evidence, do little harm, for everyone takes a salutary pleasure in proving their falseness; and when this is done, one path toward error is often closed and the road to truth is often at the same time opened.

—Charles Darwin

In order to assimilate science into our twentieth century culture and its highly industrialized society, we must regard scientific theories as guides to human action and thus an extension of common sense.

—James Bryan Conant

*The most fitting place for a man to die is where he dies
for man. Yet Willie chose a sterile, alien world that
wouldn't even see a man for millions of years . . .*

WILLIE'S PLANET

BY MIKE ELLIS

TOM STOOD in front of the filtered porthole of the tiny cabin and soaked up the sunlight that came through. It felt good after ten months of deep space blackness.

"By golly, Willie, this is luck," he said to the little man standing at the cabin's instruments, "our hundredth and last star, and it's an Earth type sun. How much difference is there from our sun?"

Willie held the color chart up beside the spectrum screen. "Almost on. Couple of degrees difference." He tossed the chart on the desk and came to stand at Tom's

side, the top of his head even with Tom's erect shoulder. His thin face was tense and worried.

"Tom," he said, "I have a hunch about this star." He stared at the screen morosely.

"I don't receive a thing," Tom chuckled, stretching his flat muscled arms to the low ceiling, his body making a triangle from his narrow hips to his wide shoulders. "What's the hunch?"

"Ever have the feeling you'd been some place before when you'd actually never been there? I feel that about this star." Willie glanced at Tom with his bright blue eyes,



ORBAN

Illustrated by Paul Orban

then looked quickly away, a bit of a red flush high on his cheeks.

"It's just because it's like our sun, that's all," Tom said.

"No, it's not that, Tom. It's something else. I feel like we ought to get out of here. Maybe it's the planet."

"Planet?" Tom said.

"Yes," Willie said quietly, "an Earth type planet."

"Earth type!" Tom shouted. "Ten thousand credits bonus! Get it on the screen, Willie. Let's see that spending money baby."

Willie turned on the viewer. Dark and shadowy on one side, bright with blue-green color on the other, the planet floated on the screen.

"The blue must be water and the green continents," Tom murmured in awe. "Damn, it's beautiful. We going to pass it close?"

"In about five more minutes of this spiral," Willie answered. "Say, Tom," Willie said hesitantly, "will you check over these figures? I'm not sure I've allowed enough for the pull of the sun." He shifted the papers aimlessly.

"My gosh, Willie," Tom said, "the only thing I know about navigation is what you've taught me this trip. Your figures are right."

"I just wanted to make sure I'm right," Willie said. "I don't like to navigate close in." He pushed the papers back on the desk. "I guess I'd better call the big shot and let him take over." He pressed the button that rang the buzzer in the Captain's tiny cabin.

"Might as well let Pudge in on it too," Tom said, "or the food will be lousy for days."

"Yeah," Willie said, and buzzed the galley.

Captain Bart strode into the cabin, his barrel chest bare and hairy above the shorts he had been napping in. He went straight to the porthole and stood with his fists on his hips, appraising the sun. Then he caught sight of the blue-green ball on the scope.

"Earth type planet! Nice going, Willie," he shouted, and clapped Willie on the back.

Willie flinched slightly, then moved over to the chart desk, a frown making vertical creases in his forehead.

Bart turned to Tom without noticing. "Ten thousand credits, Tom. I knew we'd do it. Even in this forty year old tub. Willie, are we going to pass it close?"

"Two more minutes," Willie murmured, busy with the charts on the desk. "You'd better check my course, though."

"O.K.," Bart said. "Let her go as she's headed."

Pudge came in from the galley and took his place beside Tom without comment.

"Okay," Bart said, as he sat down in the control board chair, "let's get to work. Willie, I'll run us past just outside the atmosphere. Tom, you do the life search. Pudge, get the pictures."

The cabin was silent except for the hum of the instruments. The radar probed the height of the mountains, the depth of the seas, the shape of the continents by recording the patterns of the reflections.

The electron telescopes hunted down the movement of life, the artificial straight lines of civilization, the classification of plants; and typed the metals in the ground

with the aid of a spectrum.

The wave lengths of radio and TV were checked and recorded.

One special instrument, sealed in its cabinet and booby-trapped with explosives against tampering, probed for the faint waves of any kind of life, down to single cells in the seas.

They made four passes, the last one at a hundred miles from the ground at its closest point. Then, as each man finished his task and relaxed from his instruments, they waited for the automatic tally of the results.

The computer glowed and clicked in its dull grey cabinet on the bulkhead, then dropped the tally card in the slot.

Bart snatched it out, his grin fading to a blank look as he read it. "Nothing. Not a damn thing, no life at all." He went over to the screen, folded his thick arms across his chest, and stared at it in disgust.

Tom picked up the card and studied it. "This is goofey," he said aloud, "the planet's got plant life, plenty of it, but not a trace of animal life, not even plankton in the sea. How'd that happen?"

Willie came over and studied the card with Tom. "Could have bacteria we didn't get from this height, but it sure as hell hasn't got anything else."

Pudge held up the pictures; they showed close-ups of a tangled mass of plants. "All ferns," he said. "Doesn't seem to be anything else."

"Why would a planet have ferns and nothing else, not even the beginning of animal life?" Tom wondered aloud.

"I once read an account of finding the tiny seeds of Earth's plants

millions of miles out in space," Willie said. "Seems the winds blow them right off the planet and they're so light they just keep going." He looked at the pictures, then at Tom. "Suppose some of them drifted here?"

"That's as good a guess as anything else," Tom said. "Maybe the master minds at home can figure it out."

"Only seven or eight Earth-type planets in all these years of star mapping and I had to find one with nothing but ferns on it," Bart said in disgust to the screen. "Oh, well, maybe it'll do as a colony. No alien life to worry about, anyway. We'll call it Bart McDonald Planet."

"Hey," Tom spoke up, "Willie found the planet. He should get to name it."

Bart was curt. "I'm the captain of this ship; new planets are named after the captain that discovers them."

"Nuts," Tom muttered. "We all had a hand in this. It ought to be named after all of us."

"How about calling it the ship's name," Willie put in quietly.

Bart strode over and yanked the log's keyboard out. He banged furiously on the keys for a moment, and then read aloud. "At 1430 this date, discovered McDonald's planet, an Earth class planet, signed, Bart McDonald, Captain." He slammed the log shut.

Tom snorted.

Bart gave him a dirty look and went over and sat in the control board chair. Pudge had disappeared in the galley as he always did when there was an argument. There were a few minutes of

strained silence as they worked over the instruments.

Bart turned from the control board. "As long as this place has no life, we'd be safe in landing. Suppose we earn the bonus by bringing back a full report on whether it's fit for a colony or not?"

Willie's head jerked up, his face white.

Tom frowned, and said nothing. He wanted to land but he didn't want to agree with Bart on anything.

"What say?" Bart said. "I'll even put it up for a vote."

"Okay," Tom said, thinking of walking in the sun, feeling firm ground under his feet. "It would be a shame to come all this way and then not be able to say we had explored the country."

"No," Willie said quickly. "It's dangerous. And—and besides, we'd have to go in quarantine when we got back."

"So we go in quarantine," Bart said. "We'll get paid for it." He turned to the control board. "Buzz Pudge, so he can get ready." He began punching buttons.

They went around to the middle of the day side of the planet, swinging in closer. The continents formed a rough belt around the equator of the planet, with no land extending to the small ice caps on the poles.

Tom felt his stomach knot with the thrill of going into the unknown as he watched the screen, but part of the time he was running the lights of the control board through his mind, checking the actions of Bart's big fingers as Bart confidently punched the keys. Then he caught sight of Willie's tense

face. It was white, with little splotches of pink, and his slender hands were gripping the chair he was sitting in.

"Here we go," Bart shouted exultantly, as the big green light flashed on. He hit the big green key with a stubby forefinger. The auto pilot fired the jets, the ship slowed in its descent, and they were pushed down gently in their chairs. As the spot Bart had picked came up on the screen, they could see the bare red of the ridge sticking up out of the yellow-green of the flat land. Then the yellow-green was right below them, turning black as the jets burned it to ashes. They hovered a minute, then came to rest with a creaking thud that echoed through the ship. The jets cut out, leaving their ears ringing.

"Didn't know whether we'd make it or not," Willie said. He unobtrusively wiped the glistening sweat off this slender palms on his coveralls, as he took his place at the panel.

When the tests were done, Bart grabbed the tally card as soon as the computer dropped it. "No bacteria at all. Planet's completely sterile. Let's get outside."

TOM stopped beside Bart on the narrow strip of red sand at the edge of the vast blue plain of smooth water. The water came right up to their feet without movement, just small ripples that lapped the red sand. The air was clean and brisk, and the wind was soft on his cheek.

Bart arched his thick chest and pulled in a great lung full of air. "This is wonderful. Makes a man

feel alive again." He yanked the zipper on his coveralls and pulled them off. Then he jumped in the air, swinging his thick arms.

Tom grinned at the calisthenics as he peeled off his own coveralls. The sun was warm on his bare white skin.

Bart had pulled off his boots and with just his shorts left, charged into the water, and made a flat smashing dive. He leaped and splashed the water like a porpoise.

Tom grinned at him, and just as he had done during most of his boyhood on Earth, took a gulp of air and dived down into the clear silent depths to the twenty foot deep bottom. He drifted slowly among the rocks. Bart drifted beside him as the seconds ticked by. Tom wished this was Earth and there were some fish to hunt in the clear water with a three pronged spear. Then, as his lungs seemed bursting and he had to have air, he put his feet against the bottom and shoved himself to the surface. Several seconds later, Bart burst through the surface and bobbed beside him. They floated until they got their wind back.

"You don't use a suit and oxygen tanks," Bart said. "You couldn't stay under two seconds if you did."

"I learned to hunt as a boy," Tom said. "I even had to make my own spear out of scraps. Kids don't have the credits for suits and stuff."

"No sport to it with a suit," Bart said, as they paddled lazily along with their heads up, toward shore. "As bad as hunting animals with rifles. They killed off all the animals with guns, now they're fishing out the seas with suits."

"Yeah," Tom answered, "might

as well buy the fish from the hatcheries as to go after them with a portable sub."

They dived under, and worked their way along the bottom toward shore, coming up for air, then diving again, until they were back to the beach.

They walked out and dropped on the sand to rest, the sun warm on them.

"Notice the water?" Tom asked.

"Yeah," Bart said, "no waves. Calm as hell. Can't be waves without a moon to pull them."

"Doesn't seem to be as salty as the seas at home, either," Tom said.

"Yeah, I noticed that too. Must not be as much salt in the ground as at home."

"Could be it's a young planet that hasn't had much time to wash it out of the ground, too," Tom said.

They rested in silence for a few minutes, the only sound all about them was the wind blowing across the empty land.

Then Bart jumped to his feet and started pulling on his clothes. "Come on, Tom," he said, "Let's take a look around while it's still light."

After they dressed, Bart led the way along the strip of red sand towards the ridge. The tangled mass of yellow-green vegetation grew right down to the strip of red sand, and in some places, grew right over it to stop at the sea.

"I'll be darned," Tom said, stopping at the edge of the plants. The ferns covered the ground solidly; small ones, medium ones, big ones. He crashed back into the thicker growth and kicked some of it aside with his boot. The cloud of dust choked him for a minute.

Bart came crashing in to Tom. "What you got?"

"Look," Tom said. "All these dead ferns underneath, then just the sand. They haven't decayed." He searched under the dead growth. "The dead ones just fall down underneath and the live ones just grow on top. There's not only no life here, but no decay either. Just ferns. I wonder if Willie was right."

"Don't ask me," Bart said. "Come on, let's look from that ridge."

They followed the sand around the impassable vegetation to the ridge and scrambled a little way up the barren red rocks. As far as they could see over the flat land, it was covered with the sickly yellow-green of the ferns.

They looked out and rested, then noting the sun was getting close to the horizon, they made their way back to the huge grey splotched aluminum hulk of their ship.

As Tom was about to follow Bart up the ladder, he noticed a solitary figure sitting at the edge of the sea.

"Hey, Willie," he hollered, "Come to chow." His voice echoed in the quiet. The figure waved and Tom turned back to join him. He sat down on a small boulder near where Willie was sitting and lit his tiny pipe.

Willie was sitting leaning back against a rock, and gazing dreamily out to sea. He didn't notice Tom.

"Hey, Willie," Tom said, puffing on his pipe.

Willie started and turned to Tom. "Oh, hi, Tom. I didn't know you'd come out."

"You wouldn't," Tom laughed, "not in that daydream. Thinking of

some gal back home?"

"No, just thinking," Willie said. "Find anything interesting?"

"Just a lot of rock and ferns," he answered.

"Notice how the dead plants just pack under and don't decay?" Willie asked.

"Yeah," Tom puffed his pipe. "Looks like your idea of seeds drifting through space is as good as any to explain it. Sure is an odd place. Full grown plants, but no decay and no sign of evolution."

"This is a wonderful place," Willie said as he leaned back against the rock. "I'd like to stay here for ten years."

"Why?" Tom asked. The red of the sunset was fading from the high clouds, turning them dark grey.

"Because it's so quiet." Willie smiled at him. "This is the quietest place I've ever been in. Does something to you."

"You should have been a colonist," Tom said, "then you could live on a place like this and farm it."

"I'm going to, someday," Willie answered. "I'm saving my pay to buy a charter and I'm going to buy a place like this."

Tom blew out a cloud of smoke. Seems like every guy working on crowded Earth had the same dream. A little farm on a distant planet. But few of them ever did anything about it. It was a nice dream to relieve the monotony of working; but a hell of a lot of hard work if you actually did it.

"I've even got seeds I saved when I was working on the truck farms of the West," Willie talked on, more to himself than Tom, "I saved them from some of the biggest and

heaviest producing plants. I've got tomatoes, beans, corn, squash. They'll make a fine beginning."

Tom thought of Willie leaving the safety and comfort of living that was found only in the crowded cities of Earth. "Think you'd like the loneliness of farming?" he asked.

Willie spoke with conviction. "There's nothing I'd like more. That's why I started star mapping, to get out of the mobs. That's why I'm out here."

"Dinner's on," Pudge called from the ship.

Tom knocked the ashes out of his pipe. "Let's eat." He led the way to the ship.

THE MEAL was eaten in an appreciative silence, for Pudge had spread a feast of celebration. When the last of the unaccustomed delicacies was gone, they pushed their plates away.

"Boy," Bart grunted out as he lit his pipe, "I haven't eaten like that since the last time I was hunting. Say, Tom, what say you and I go fishing on the Florida coast when we get back. We can get a fish a day down there."

"We'll do that," Tom said without conviction. He knew when they got back they would go their different ways in the eternal quest of spacemen back home.

"I'm due to get a bigger ship when I get back," Bart said expansively, "and I'm sure going to have Pudge for my cook. How about you, Tom? You're due to step up, now. Want to be my navigator?"

"Sure," Tom said, surprised.

"We'll really do some star map-

ping," Bart said. "With a bigger and newer ship, we can go clear to the end of the galaxy. Who knows what we'll find for the Astral Service."

"What about me?" Willie said. "Am I going to be retired as your First Mate?"

Tom looked at Willie, he had almost forgotten Willie was there because he was so quiet. Willie was trying to look bright and happy, but even through the happy haze, Tom could see he looked tired and depressed. The wine hadn't done a thing for him, and his dinner was only half eaten.

Bart had looked down at his plate, frowning, at Willie's question. He knocked out the ashes of his pipe and tossed it on the table. He looked Willie squarely in the eye. "I was going to save it until we got back, but since you asked, I'll give it to you straight. Willie, I'm sending you back for a check-up when we get in. You can't seem to do a darn thing anymore, without having somebody doublecheck it. Tom and I have had to navigate the ship most of this trip, when you were supposed to do it. There's no place out here for a man that can't do his job. It puts too much on the others. I think you need a long rest or something."

Willie sat there, his face white, blinking his eyes rapidly. Then he lurched to the door, his chair spinning behind him. Pudge got up and went to the galley.

"What the hell did you do that for?" Tom asked Bart. "Why didn't you kid him along and give it to him easy when we got back. It would have been easier on his feelings."

"That's not my way," Bart said. "He asked me and I gave it to him straight. He's no good out here anymore. In fact, he's dangerous. If something should come up that needs quick action, we'd all be wiped out by the time he called me."

"Okay," Tom said. "It was honest, and it was truthful. But it sure as hell hurt him. I'm going to see him and try to ease it over."

"You'll be a good first mate, Tom," Bart said. "But don't baby the crew too much. They've either got it or they haven't."

Tom went down the narrow passageway to Willie's cabin and knocked on the door. When he didn't get an answer, he opened the door. Willie was lying on his bunk with his face to the wall. He didn't move as Tom sat in the chair.

"Hey, Willie," Tom said. "You got company. I come in to shoot the breeze with you."

Willie turned over reluctantly. "I'm sorry, Tom. I hate Bart's guts. He's always so goddam right." Willie clasped his hands behind his head on the pillow, and stared at the ceiling. "He'll wash me out of this job and then what will I do? I've failed at everything else I've tried to do. It's the people, Tom. I can't do anything in front of people. What am I going to do when they ground me? I can't stand the crowds of people on Earth." He rolled over against the wall.

Tom worked his big knuckled long fingers together. "Maybe it won't amount to anything. The brass will just put you on another ship."

"Not if he puts in that report," Willie said, his voice muffled against

the wall.

Tom sat there. There was nothing more to say. Willie was right. "Well, I'll see you on the morning." He got up. "Maybe we can go for a hike or something." When Willie didn't answer, he went out and carefully shut the door behind him.

In his own bunk, he tried to think of something else, but the problem of Willie bothered him for a long, restless time. Then it was morning and the clock was chiming.

Pudge came in to the table where Tom and Bart were waiting for breakfast. "Some one's been in the stores. A couple of cases of emergency rations are missing. It must have been in the night."

"What the hell," Bart said, jumping up. "In the stores?"

"Where's Willie?" Tom said, getting up.

"Who cares," Bart said. "There's no one on this planet but us. Who'd get into our stores? Or what?"

"That's what I mean," Tom said angrily. "Where's Willie?"

Bart gave him a startled glance, then led the way to Willie's cabin. He wasn't there. They went through the ship. They dropped out of the lock, one after the other, into the blinding sunlight and looked around. Willie was gone.

"We'd better find him before he gets too far," Tom said. "I've got a hunch he's not coming back. That's why the food."

"I'll wring the little coward's neck," Bart said as he led the way along the one trail of footprints they had all made to the sand by the sea. They scattered out, calling and looking. Tom, on a hunch, headed for the shoulder of the mountain that jutted out in the sea, while

Bart and Pudge went the other way.

THE SUN was high in the clear blue sky when Tom at last came around the point to the little cove a stream had made in the side of the mountain. He walked up the narrow sandy bank between the red cliffs until a short way in, he found the cases of food and a pile of blankets. His yell echoed off the red cliffs several times before he looked up to see Willie standing on top of the cliff twenty feet above him.

"Come on back to the ship, Willie," Tom called as though Willie was just out for a walk. "We're going to blast off this afternoon. Got to head home."

"I'm not coming back," Willie said. "I'm staying here."

"Be reasonable," Tom shouted, "you can't stay here. Come on back to the ship."

"I'm going to live here. I'm going to colonize," Willie said.

"What?" Tom's voice was unbelieving.

"I'm going to live here," Willie repeated. "Tom, give me your word you won't force me to go back and I'll come down so we can talk."

"O.K.," Tom said, "you have my word."

"Bart isn't around, is he?" Willie slid down the cliff in a shower of loose rock and dirt.

"You can't stay here, Willie," Tom began, "how are you going to live, to eat?"

"I've got my seeds," Willie said dreamily. "I'll have a real farm." He waved vaguely at the ferns. "Look at the stuff grow. The climate is ideal. I'll build a hut and

farm enough to eat."

"Willie," Tom said, trying another angle. "There are no other people here. What'll you do if you get sick or need help?"

"I won't get sick and I won't need help," Willie said. "That's why I want to stay here, 'cause there aren't any people. I can have a thousand acres all to myself. I can stake out a whole square mile and live right in the middle of it." He laughed like a little kid. "Tom, this is what I've wanted all my life. Why should I go back to Earth and then try to come back later, I'm staying here, now."

Tom had the feeling he was trying to argue with an ostrich with its head in the sand. What would Willie do for food if his crops failed when the emergency rations were gone? Willie was gambling his life for a dream, but he didn't know it. Willie saw only what he wanted to see, disregarding everything else. Arguing was useless. The only way they could get Willie back aboard was to carry him back.

"Well, okay, Willie," Tom said. "I'll go back and tell Bart. But I'll get him to hold the ship until tomorrow if you should change your mind."

"I won't," Willie said. "So long, Tom." He held out his hand. "You've been a swell guy."

Tom took the hand and shook it.

"So long, Willie. I'll be back someday, to see how you're making out." He started back down the narrow beach. Along the way, he decided that they would have to catch Willie and take him back to Earth for hospitalization. Coming back with Bart wouldn't be breaking his word. That had only been

for the time he had talked to Willie.

Bart heard Tom's report in his usual way. "Let's go," was his only comment.

They climbed up the crumbling red rock and followed the edge of the cliff. They climbed over the small boulders, around the huge ones, endlessly finding the way blocked, but each time going back a little and by going around, finding a new way that was clear. The sun was halfway to the western horizon when they stopped to rest on a pile of small boulders near the top. Tom leaned back against the rock behind him. A trickle of sweat ran down his ribs from his armpit under his coveralls.

Bart snorted through his nose. "It'll be dark soon." He wiped his arm across his forehead, the sweat making a dark stain on the sleeve. "Damn that fool Willie. He'll pay for this when we get him back to Earth. He must be crazy or something."

"My God," Tom said. "Is that finally dawning on you?"

Bart looked up at Tom, his dark brown eyes small in his broad sweat-streaked face. As he continued to stare at Tom without saying anything, Tom felt the stir of annoyance, then the beginning of hot tempered anger. They sat and waited, looking for the movement Willie would make if he showed himself. Nothing stirred in the yellow-green ferns below. After an hour of watching, Bart got to his feet.

"He's holed up somewhere and pulled the hole in after him. Let's get down there and drag him out." He started back down the ridge the way they had come up.

Halfway down, as they stopped for a breather, Tom noted the height of the sun. It was going to be dark before they could work their way back to the ship. A low bank of rolling grey clouds lay all along the straight horizon line of the sea; as the sun sank behind the clouds, it turned the edges of them to fiery red.

Bart hurried down the ridge, watching only for a glimpse of Willie, but Tom looked at the sunset occasionally, trying to store up the memory of the color for the months ahead.

As they reached the stream cliff, Tom stopped Bart.

"Bart, I've got an idea. It's almost dark. Willie will think we've headed back to get to the ship before it's too dark to find our way. He's probably sitting on a rock, watching the sunset and daydreaming. Let's look on the edge of this little cliff where it ends at the sea."

"O.K.," Bart said, leading the way. The only light left was the reflected red light of the clouds that made long dark shadows behind the rocks.

They came around the rocks, onto the cliff point overlooking the sea and the cove, and there was Willie, sitting with his back to a big rock, his chin resting on his cupped hands, gazing dreamily out to sea.

"Willie!" Bart shouted, lunging for him.

Willie jerked around to see them, then he was up and sliding down the loose rock into the shadowy cove below.

"Grab him, Tom," Bart shouted as he went sliding and falling down, the loose rock after him.

Tom jumped down the rocks to the bottom and slid to a stop, the loose rocks rolling down around him, but Willie was deep in the ferns with only his head and shoulders showing.

Bart had the automatic pistol out and pointed at Willie. "Stop you crazy fool, or I'll shoot," he shouted, his voice echoing off the cliffs. Willie only crashed into the ferns more desperately.

Bart raised the automatic and fired a burst of shots, the sharp explosions echoing shatteringly around them. Tom made a flying tackle and smashed into Bart. They went down in the ferns, struggling for the gun, until Bart managed to roll and push his way to his feet.

"Knock it off," Bart shouted. "What the hell are you trying to do?"

"Keep you from killing him," Tom shouted back as he got to his feet.

"I wasn't trying to kill him," Bart snapped. "I was trying to scare him into stopping so we could grab him, now he's got clean away in those damn ferns." He waved a hand helplessly at the mass of dark vegetation. Willie was gone all right. "Now we'll have to spend days hunting for that lunatic. Next time let me handle it. I'm the captain of this expedition."

"Okay," Tom said angrily, "but let's catch him, not kill him. He hasn't done anything, just wants to be alone, that's all."

"He's deserted," Bart said, "and he signed articles, so that's a crime. How the hell am I going to explain a lost crewman when we go back. And on my first trip as captain."

"That's your worry," Tom said.

"He's colonizing, not deserting."

"You should have been a lawyer," Bart said as he put the gun in his holster. "But this isn't getting that screwball aboard." He groped in the pocket of his coveralls and pulled out a small packlight. The white searchbeam lit up the ferns around them with glaring brightness. "Come on, let's try to find him." He led the way into the ferns.

They hunted through the ferns, forcing their way every step. The searchbeam was only good for a few feet in the dense growth. They knew Willie was close, but in the ferns they could almost step on him and not know it.

At last Bart gave up. "Let's go back to the ship. We'll come back in the morning, when it's light." Following him along the beach toward the ship, Tom had the feeling that in the morning might be too late. Willie might have been hit by the burst of shots, or he might take off in the ferns so far they never could find him.

TOM rolled out of his bunk at the first bell, wincing at his sore muscles. After getting the first aid kit from the bathroom, he quietly walked down the narrow passageway and out into the bright sunlight. As he walked through the grey ash to the strip of red sand, the quiet was like a blanket over everything, after the soft hum of the living ship. The breeze blew softly against his face, hummed past his ears, and rustled the ferns. The sea was glass smooth as far as he could see across its surface, smooth right up to where the water turned deep green as it got shal-

lower. He could understand why Willie wanted to stay here. It was a perfect place for anyone who loved solitude and there was probably none like it in the whole system.

He thought of how a man could live here, with no one to bother him, nothing to buy, no need to do any more than just produce enough food to live. A little shack to keep off the rain, a little field to grow food.

But there would be no one to talk to, no one to share experiences and troubles and little triumphs, no one to laugh with, no challenge to overcome, no excitement.

"Not for me," Tom said aloud, and his voice was strange in the quiet. "Boy, this place puts a spell on a guy, almost hypnotizes him." He laughed aloud. "Even got me talking to myself." He hurried on to hunt for Willie.

Then he came to the little cove where Willie had his camp. The pile of food and blankets was still there. Willie was there, too. He was lying half in the pool of water. As Tom crunched over the sand and knelt beside him, Willie opened his eyes.

"Hi, Tom," he said faintly. "I'm glad you came alone."

"Hi, Willie," Tom said as he looked at the thin chest with the small neat hole low on the left side. "So he did shoot you, didn't he." He opened the first aid kit. "I'll get you back to the ship and you'll be O.K." He started putting a dressing on the wound.

Willie looked at him with his bright blue eyes. "Never mind, Tom. I just got to stay here in spite of the Captain." His voice was so

low Tom had to lean closer to hear him. Willie coughed slightly and winced with the pain.

Tom finished the bandage. He knew there was nothing he could do; Willie was hurt inside and only a doctor could help him. But there were no doctors here. He wanted to do something for him to make him more comfortable. He started to put an arm under him to move him out of the pool. "I'll get you out of this water," he said.

"No. Tom," Willie said. "Leave me here. I crawled all night to get here. I want to die in this pool."

"In the water?" Tom said in surprise.

"Yes, in the water. Don't you understand? I thought you would." He stared up at the white tracing of the clouds in the sky.

Tom waited, silently. He knelt there, the sun burning hot on his back.

"I wanted to stay," Willie said. "I had to stay. Didn't you feel anything about this planet, Tom?"

Tom thought a moment. "I did feel a little," he admitted. "On the way over here. Like it would be a nice place to live."

"That's it," Willie smiled. "Don't you see. Here was this planet, ripe for life, but without life. Then the seeds of the ferns got blown off Earth and drifted here. But it needed more, it needed animal life to complete the cycle."

"Then we got 'blown off Earth.' Bart for the glory, Pudge for the ride, you for the excitement, and me—me—because I had to, I guess. Because I couldn't stand it back there. Seeds, all four of us, and not knowing it. That's why we had to land. That's why one of us had to

stay and I guess it was just me. Now the rest of you can go back to Earth."

Willie coughed, much longer this time. Then he lay back exhausted. "Tom," he whispered, "look at the edge of my camp. In the ferns."

Tom walked over to the edge of the camp. He looked at the yellow-green ferns, wondering what Willie meant. Then he saw it. The faint steaming from the packed dead ferns under the growing ones, the spreading dark spot, the already darker green of the plants growing around the spot.

Willie had brought the seeds of decay with him, as well as the seeds of life. The dead plants were decaying for the first time on this planet. This spot would spread until the whole planet was covered with dark green; and life would be as it was on Earth.

Tom went back to Willie and stood looking down at him. Then he knelt and gently closed Willie's eyelids. He thought of moving him, digging him a shallow grave. But

kneeling there in the silent cove, he had the hunch that maybe there was more to this. Willie had wanted to stay in the little pool. The stream came down off the ridge through the pool to the sea. Maybe if Willie stayed there, the bacteria of his body would live on, and be washed into the sea. The water was warm and there were no enemies to destroy them and there were plants to feed them. Perhaps, Willie was right. Maybe he *was* the seed of life coming to this planet; and in a million years men might walk these shores.

Tom straightened up. He took a deep breath and looked around the little cove, and then back to Willie.

"It's your planet, now, Willie. Willie's Planet from now on. What Bart put in the log and what spacemen will call it as they go by, will be two different things. Or did you know that in your heart, too." He was silent a moment. "So long, Willie. Go with God."

He turned and crunched along the sand towards the ship. • • •

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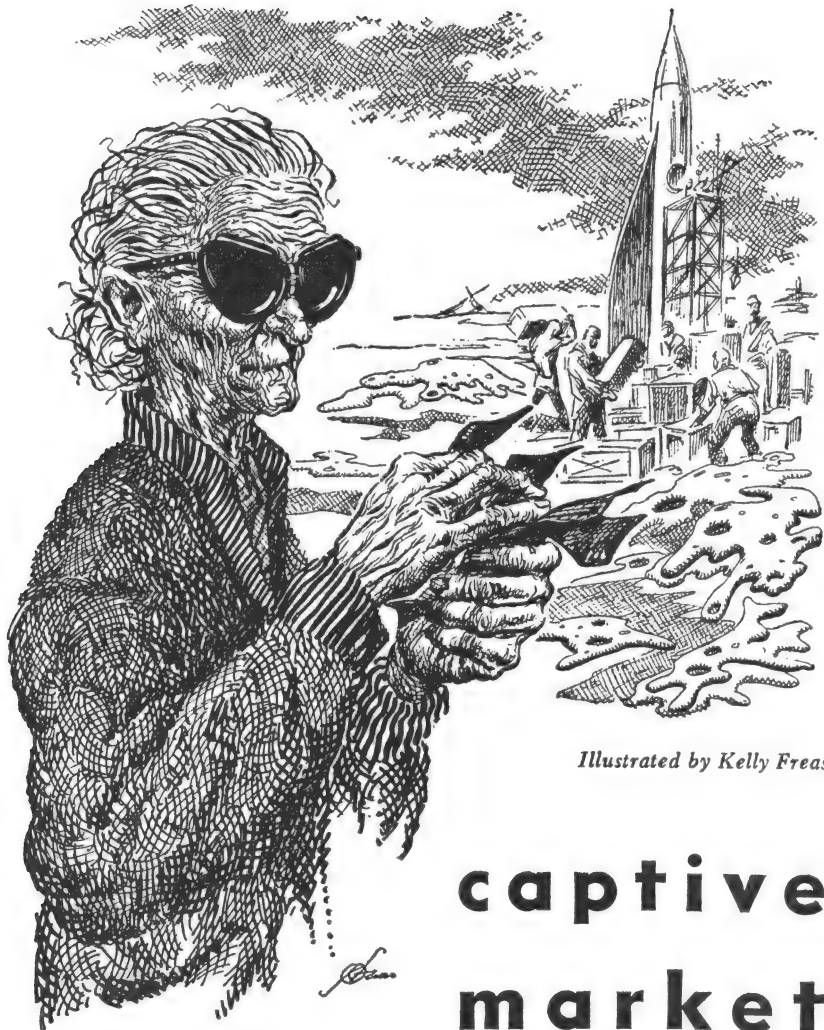
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Illustrated by Kelly Freas

captive market

*Old Edna Berthelson was a business woman with
peculiar talents for non-competitive trading . . .*

SATURDAY morning, about eleven o'clock, Mrs. Edna Berthelson was ready to make her little trip. Although it was a weekly affair, consuming four hours of her valuable business time, she made the profitable trip alone, preserving for herself the integrity of her find.

Because that was what it was. A find, a stroke of incredible luck. There was nothing else like it, and she had been in business fifty-three years. More, if the years in her father's store were counted—but they didn't really count. That had been for the experience (her father made that clear); no pay was involved. But it gave her the understanding of business, the feel of operating a small country store, dusting pencils and unwrapping fly paper and serving up dried beans and chasing the cat out of the cracker barrel where he liked to sleep.

Now the store was old, and so was she. The big heavy-set, black-browed man who was her father had died long ago; her own children and grandchildren had been

more frail and stern and grim. A little more themselves.

That morning very early Jackie said: "Grandmaw, where are you going?" Although he knew, of course, where she was going. She was going out in her truck as she always did; this was the Saturday trip. But he liked to ask; he was pleased by the stability of the answer. He liked having it always the same.

To another question there was another unvarying answer, but this one didn't please him so much. It came in answer to the question: "Can I come along?"

The answer to that was always *no*.

Edna Berthelson laboriously carried packages and boxes from the back of the store to the rusty, upright pick-up truck. Dust lay over the truck; its red-metal sides were bent and corroded. The motor was already on; it was wheezing and heating up in the mid-day sun. A few drab chickens pecked in the dust around its wheels. Under the porch of the store a plump white shaggy sheep squatted, its face vapid, indolent, indifferently watching the activity of the day. Cars and trucks rolled along Mount Diablo Boulevard. Along Lafayette Avenue a few shoppers strolled, farmers and their wives, petty businessmen, farm hands, some city women in their gaudy slacks and print shirts, sandals, bandanas. In the front of the store the radio tinily played popular songs.

"I asked you a question," Jackie said righteously. "I asked you where you're going."

Mrs. Berthelson bent stiffly over to lift the last armload of boxes.

BY PHILIP K. DICK

spawned, had crept out over the world, were everywhere. One by one they had appeared, lived in Walnut Creek, sweated through the dry, sun-baked summers, and then gone on, leaving one by one as they had come. She and the store sagged and settled a little more each year; became a little

Most of the loading had been done the night before by Arnie the Swede, the hulking white-haired hired-man who did the heavy work around the store. "What?" she murmured vaguely, her gray, wrinkled face twisting with concentration. "You know perfectly well where I'm going."

Jackie trailed plaintively after her, as she re-entered the store to look for her order book. "Can I come? Please, can I come along? You never let me come—you never let *anybody* come."

"Of course not," Mrs. Berthelson said sharply. "It's nobody's business."

"But I *want* to come along," Jackie explained.

Slyly, the little old woman turned her gray head and peered back at him, a worn, colorless bird taking in a world perfectly understood. "So does everybody else." Thin lips twitching in a secret smile, Mrs. Berthelson said softly: "But nobody can."

Jackie didn't like the sound of that. Sullenly, he retired to a corner, hands stuck deep in the pockets of his jeans, not taking part in something that was denied him, not approving of something in which he could not share. Mrs. Berthelson ignored him. She pulled her frayed blue sweater around her thin shoulders, located her sunglasses, pulled the screen door shut after her, and strode briskly to the truck.

Getting the truck into gear was an intricate process. For a time she sat tugging crossly at the shift, pumping the clutch up and down, waiting impatiently for the teeth to fall into place. At last, screeching

and chattering, the gears meshed; the truck leaped a little, and Mrs. Berthelson gunned the motor and released the hand brake.

As the truck roared jerkily down the driveway, Jackie detached himself from the shade by the house and followed along after it. His mother was nowhere in sight. Only the dozing sheep and the two scratching chickens were visible. Even Arnie the Swede was gone, probably getting a cold coke. Now was a fine time. Now was the best time he had ever had. And it was going to be sooner or later anyhow, because he was determined to come along.

Grabbing hold of the tailboard of the truck, Jackie hoisted himself up and landed face-down on the tightly-packed heaps of packages and boxes. Under him the truck bounced and bumped. Jackie hung on for dear life; clutching at the boxes he pulled his legs under him, crouched down, and desperately sought to keep from being flung off. Gradually the truck righted itself, and the torque diminished. He breathed a sigh of relief and settled gratefully down.

He was on his way. He was along, finally. Accompanying Mrs. Berthelson on her secret weekly trip, her strange covert enterprise from which—he had heard—she made a fabulous profit. A trip which nobody understood, and which he knew, in the deep recesses of his child's mind, was something awesome and wonderful, something that would be well worth the trouble.

He had hoped fervently that she wouldn't stop to check her load along the way.

WITH INFINITE care, Tellman prepared himself a cup of "coffee". First, he carried a tin cup of roasted grain over to the gasoline drum the colony used as a mixing bowl. Dumping it in, he hurried to add a handful of chicory and a few fragments of dried bran. Dirt-stained hands trembling, he managed to get a fire started among the ashes and coals under the pitted metal grate. He set a pan of tepid water on the flames and searched for a spoon.

"What are you up to?" his wife demanded from behind him.

"Uh," Tellman muttered. Nervously, he edged between Gladys's and the meal. "Just fooling around." In spite of himself, his voice took on a nagging whine. "I have a right to fix myself something, don't I? As much right as anybody else."

"You ought to be over helping."

"I was. I wrenched something in my back." The wiry middle-aged man ducked uneasily away from his wife; tugging at the remains of his soiled white shirt, he retreated toward the door of the shack. "Damn it, a person has to rest, sometimes."

"Rest when we get there." Gladys wearily brushed back her thick dark-blond hair. "Suppose everybody was like you."

Tellman flushed resentfully. "Who plotted our trajectory? Who's done all the navigation work?"

A faint ironic smile touched his wife's chapped lips. "We'll see how your charts work out," she said. "Then we'll talk about it."

Enraged, Tellman plunged out of the shack, into the blinding late-afternoon sunlight.

He hated the sun, the sterile white glare that began at five in the morning and lasted until nine in the evening. The Big Blast had sizzled the water vapor from the air; the sun beat down pitilessly, sparing nobody. But there were few left to care.

To his right was the cluster of shacks that made up the camp. An eclectic hodge-podge of boards, sheets of tin, wire and tar paper, upright concrete blocks, anything and everything dragged from the San Francisco ruins, forty miles west. Cloth blankets flapped dismally in doorways, protection against the vast hosts of insects that swept across the camp site from time to time. Birds, the natural enemy of insects, were gone. Tellman hadn't seen a bird in two years—and he didn't expect to see one again. Beyond the camp began the eternal dead black ash, the charred face of the world, without features, without life.

The camp had been set up in a natural hollow. One side was sheltered by the tumbled ruins of what had once been a minor mountain range. The concussion of the blast had burst the towering cliffs; rock had cascaded into the valley for days. After San Francisco had been fired out of existence, survivors had crept into the heaps of boulders, looking for a place to hide from the sun. That was the hardest part: the unshielded sun. Not the insects, not the radio-active clouds of ash, not the flashing white fury of the blasts, but the sun. More people had died of thirst and dehydration and blind insanity than from toxic poisons.

From his breast pocket, Tellman

got a precious package of cigarettes. Shakily, he lit up. His thin, claw-like hands, were trembling, partly from fatigue, partly from rage and tension. How he hated the camp. He loathed everybody in it, his wife included. Were they worth saving? He doubted it. Most of them were barbarians, already; what did it matter if they got the ship off or not? He was sweating away his mind and life, trying to save them. The hell with them.

But then, his own safety was involved with theirs.

He stalked stiff-legged over to where Barnes and Masterson stood talking. "How's it coming?" he demanded gruffly.

"Fine," Barnes answered. "It won't be long, now."

"One more load," Masterson said. His heavy features twitched uneasily. "I hope nothing gets fouled up. She ought to be here any minute."

Tellman loathed the sweaty, animal-like scent that rolled from Masterson's beefy body. Their situation wasn't an excuse to creep around filthy as a pig . . . on Venus, things would be different. Masterson was useful, now; he was an experienced mechanic, invaluable in servicing the turbine and jets of the ship. But when the ship had landed and been pillaged . . .

Satisfied, Tellman brooded over the re-establishment of the rightful order. The hierarchy had collapsed in the ruins of the cities, but it would be back strong as ever. Take Flannery, for example. Flannery was nothing but a foul-mouthed shanty-Irish stevedor . . . but he was in charge of loading the ship, the greatest job at the mo-

ment. Flannery was top dog, for the time being . . . but that would change.

It had to change. Consoled, Tellman strolled away from Barnes and Masterson, over to the ship itself.

The ship was huge. Across its muzzle the stenciled identification still remained, not yet totally obliterated by drifting ash and the searing heat of the sun.

U. S. ARMY ORDINANCE SERIES A-3 (b)

Originally, it had been a high-velocity "massive retaliation" weapon, loaded with an H-warhead, ready to carry indiscriminate death to the enemy. The projectile had never been launched. Soviet toxic crystals had blown quietly into the windows and doors of the local command barracks. When launching day arrived, there was no crew to send it off. But it didn't matter—there was no enemy, either. The rocket had stood on its buttocks for months . . . it was still there when the first refugees straggled into the shelter of the demolished mountains.

"Nice, isn't it?" Patricia Shelby said. She glanced up from her work and smiled blearily at Tellman. Her small, pretty face was streaked with fatigue and eye-strain. "Sort of like the trylon at the New York World's Fair."

"My God," Tellman said, "you remember that?"

"I was only eight," Patricia answered. In the shadow of the ship she was carefully checking the automatic relays that would maintain the air, temperature, and humidity of the ship. "But I'll never for-

get it. Maybe I was a precog—when I saw it sticking up I knew someday it would mean a lot to everybody.”

“A lot to the twenty of us,” Tellman corrected. Suddenly he offered her the remains of his cigarette. “Here—you look like you could use it.”

“Thanks.” Patricia continued with her work, the cigarette between her lips. “I’m almost done—Boy, some of these relays are tiny. Just think.” She held up a microscopic wafer of transparent plastic. “While we’re all out cold, this makes the difference between life and death.” A strange, awed look crept into her dark-blue eyes. “To the human race.”

Tellman guffawed. “You and Flannery. He’s always spouting idealistic twaddle.”

Professor John Crowley, once head of the history department at Stanford, now the nominal leader of the colony, sat with Flannery and Jean Dobbs, examining the suppurating arm of a ten-year-old boy. “Radiation,” Crowley was saying emphatically. “The over-all level is rising daily. It’s settling ash that does it. If we don’t get out soon, we’re done.”

“It’s not radiation,” Flannery corrected in his ultimately-certain voice. “It’s toxic crystalline poisoning; that stuff’s knee-deep up in the hills. He’s been playing around up there.”

“Is that so?” Jean Dobbs demanded. The boy nodded his head not daring to look at her. “You’re right,” she said to Flannery.

“Put some salve on it,” Flannery said. “And hope he’ll live. Outside of sulfathiazole there’s not much

we have.” He glanced at his watch, suddenly tense. “Unless she brings the penicillin, today.”

“If she doesn’t bring it today,” Crowley said, “she’ll never bring it. This is the last load; as soon as it’s stored, we’re taking off.”

Rubbing his hands, Flannery suddenly bellowed: “Then get out the money!”

Crowley grinned. “Right.” He fumbled in one of the steel storage lockers and yanked out a handful of paper bills. Holding a sheaf of bills up to Tellman he fanned them out invitingly. “Take your pick. Take them all.”

Nervously, Tellman said, “Be careful with that. She’s probably raised the price on everything, again.”

“We’ve got plenty.” Flannery took some and stuffed it into a partly-filled load being wheeled by, on its way to the ship. “There’s money blowing all over the world, along with the ash and particles of bone. On Venus we won’t need it—she might as well have it all.”

On Venus, Tellman thought, savagely, things would revert to their legitimate order—with Flannery digging sewers where he belonged. “What’s she bringing mostly?” he asked Crowley and Jean Dobbs, ignoring Flannery. “What’s the last load made up of?”

“Comic books,” Flannery said dreamily, wiping perspiration from his balding forehead; he was a lean, tall, dark-haired young man. “And harmonicas.”

Crowley winked at him. “Uke picks, so we can lie in our hammocks all day, strumming *Someone’s in the Kitchen with Dinah*.”

“And swizzle sticks,” Flannery

reminded him. "In order that we may all the more properly flatten the bubbles of our vintage '38 champagne."

Tellman boiled. "You—degenerate!"

Crowley and Flannery roared with laughter, and Tellman stalked off, smoldering under this new humiliation. What kind of morons and lunatics were they? Joking at a time like this . . . he peered miserably, almost accusingly, at the ship. Was this the kind of world they were going to found?

In the pitiless white-hot sun, the huge ship shimmered and glowed. A vast upright tube of alloy and protective fiber mesh rising up above the tumble of wretched shacks. One more load, and they were off. One more truckful of supplies from their only source, the meager trickle of uncontaminated goods that meant the difference between life and death.

Praying that nothing would go wrong, Tellman turned to await the arrival of Mrs. Edna Berthelson and her battered red-pick-up truck. Their fragile umbilical cord, connecting them with the opulent, undamaged past.

ON BOTH sides of the road lay groves of lush apricot trees. Bees and flies buzzed sleepily among the rotting fruit scattered over the soil; every now and then a roadside stand appeared, operated by somnambulistic children. In driveways stood parked Buicks and Oldsmobiles. Rural dogs wandered here and there. At one intersection stood a swank tavern, its neon sign blinking on and off, ghostly pale

in the mid-morning sun.

Mrs. Edna Berthelson glared hostilely at the tavern, and at the cars parked around it. City people were moving out into the valley, cutting down the old oak trees, the ancient fruit orchards, setting up suburban homes, stopping in the middle of the day for a whiskey sour and then driving cheerfully on. Driving at seventy-five miles an hour in their swept-back Chryslers. A column of cars that had piled up behind her truck suddenly burst forth and swung past her. She let them go, stony-faced, indifferent. Served them right for being in such a hurry. If she always hurried like that, she would never have had time to pay attention to that odd ability she had found in her introspective, lonely drives; never have discovered that she could look "ahead", never have discovered that hole in the warp of time which enabled her to trade so easily at her own exorbitant prices. Let them hurry if they wanted. The heavy load in the back of the truck jogged rhythmically. The motor wheezed. Against the back window a half-dead fly buzzed.

Jackie lay stretched out among the cartons and boxes, enjoying the ride, gazing complacently at the apricot trees and cars. Against the hot sky the peak of Mount Diablo rose, blue and white, an expanse of cold rock. Trails of mist clung to the peak; Mount Diablo went a long way up. He made a face at a dog standing indolently at the side of the road, waiting to cross. He waved gaily at a Pacific Telephone Co. repairman, stringing wire from a huge reel.

Abruptly the truck turned off the

state highway and onto a black-surfaced side road. Now there were fewer cars. The truck began to climb . . . the rich orchards fell behind and gave way to flat brown fields. A dilapidated farm house lay to the right; he watched it with interest, wondering how old it was. When it was out of sight, no other man-made structures followed. The fields became unkempt. Broken, sagging fences were visible occasionally. Torn signs, no longer legible. The truck was approaching the base of Mount Diablo . . . almost nobody came this way.

Idly, the boy wondered why Mrs. Berthelson's little trip took her in this direction. Nobody lived here; suddenly there were no fields, only scrub grass and bushes, wild countryside, the tumbled slope of the mountain. A rabbit hopped skillfully across the half-decayed road. Rolling hills, a broad expanse of trees and strewn boulders . . . there was nothing here but a State fire tower, and maybe a water shed. And an abandoned picnic area, once maintained by the State, now forgotten.

An edge of fear touched the boy. No customers lived out this way . . . he had been positive the battered red pick-up truck would head directly into town, take him and the load to San Francisco or Oakland or Berkeley, a city where he could get out and run around, see interesting sights. There was nothing here, only abandoned emptiness, silent and foreboding. In the shadow of the mountain, the air was chill. He shivered. All at once he wished he hadn't come.

Mrs. Berthelson slowed the truck and shifted noisily into low. With a

roar and an explosive belch of exhaust gasses, the truck crept up a steep ascent, among jagged boulders, ominous and sharp. Somewhere far off a bird cried shrilly; Jackie listened to its thin sounds echoing dismally away and wondered how he could attract his grandmother's attention. It would be nice to be in front, in the cabin. It would be nice—

And then he noticed it. At first he didn't believe it . . . but he *had* to believe it.

Under him, the truck was beginning to fade away.

It faded slowly, almost imperceptibly. Dimmer and dimmer the truck grew; its rusty red sides became gray, then colorless. The black road was visible underneath. In wild panic, the boy clutched at the piles of boxes. His hands passed through them; he was riding precariously on an uneven sea of dim shapes, among almost invisible phantoms.

He lurched and slid down. Now—hideously—he was suspended momentarily half-way *through* the truck, just above the tail pipe. Groping desperately, he struggled to catch hold of the boxes directly above him. "Help!" he shouted. His voice echoed around him; it was the only sound . . . the roar of the truck was fading. For a moment he clutched at the retreating shape of the truck; then, gently, gradually, the last image of the truck faded, and with a sickening crunch, the boy dropped to the road.

The impact sent him rolling into the dry weeds beyond the drainage ditch. Stunned, dazed with disbelief and pain, he lay gasping, try-

ing feebly to pull himself up. There was only silence; the truck, Mrs. Berthelson, had vanished. He was totally alone. He closed his eyes and lay back, stupefied with fright.

Sometime later, probably not much later, he was aroused by the squeal of brakes. A dirty, orange State maintenance truck had lurched to a stop; two men in khaki work clothes were climbing down and hurrying over.

"What's the matter?" one yelled at him. They grabbed him up, faces serious and alarmed. "What are you doing here?"

"Fell," he muttered. "Off the truck."

"What truck?" they demanded. "How?"

He couldn't tell them. All he knew was that Mrs. Berthelson had gone. He hadn't made it, after all. Once again, she was making her trip alone. He would never know where she went; he would never find out who her customers were.

GRIPPING the steering wheel of the truck, Mrs. Berthelson was conscious that the transition had taken place. Vaguely, she was aware that the rolling brown fields, rocks and green scrub bushes, had faded out. The first time she had gone "ahead" she had found the old truck floundering in a sea of black ash. She had been so excited by her discovery that day that she had neglected to "scan" conditions on the other side of the hole. She had known there were customers . . . and dashed headlong through the warp to get there first. She smiled complacently . . . she needn't have hurried, there was no

competition here. In fact, the customers were so eager to deal with her, they had done virtually everything in their power to make things easier for her.

The men had built a crude strip of road out into the ash, a sort of wooden platform onto which the truck now rolled. She had learned the exact moment to "go ahead"; it was the instant that the truck passed the drainage culvert a quarter mile inside the State park. Here, "ahead", the culvert also existed . . . but there was little left of it, only a vague jumble of shattered stone. And the road was utterly buried.

Under the wheels of the truck the rough boards thumped and banged. It would be bad if she had a flat tire . . . but some of them could fix it. They were always working; one little additional task wouldn't make much difference. She could see them, now; they stood at the end of the wooden platform, waiting impatiently for her. Beyond them was their jumble of crude, smelly shacks, and beyond that, their ship.

A lot she cared about their ship. She knew what it was: stolen Army property. Setting her bony hand rigidly around the gearshift knob, she threw the truck into neutral and coasted to a stop. As the men approached, she began pulling on the hand brake.

"Afternoon," Professor Crowley muttered, his eyes sharp and keen as he peered eagerly into the back of the truck.

Mrs. Berthelson grunted a non-committal answer. She didn't like any of them . . . dirty men, smelling of sweat and fear, their bodies

and clothes streaked with grime, and the ancient coating of desperation that never seemed to leave them. Like awed, pitiful children they clustered around the truck, poking hopefully at the packages, already beginning to pluck them out onto the black ground.

"Here, now," she said sharply. "You leave those alone."

Their hands darted back as if seared. Mrs. Berthelson sternly climbed from the truck, grabbed up her inventory sheet, and plodded up to Crowley.

"You just wait," she told him. "Those have to be checked off."

He nodded, glanced at Master-son, licked his dry lips, and waited. They all waited. It had always been that way; they knew, and she knew, that there was no other way they could get their supplies. And if they didn't get their supplies, their food and medicine and clothing and instruments and tools and raw materials, they wouldn't be able to leave in their ship.

In this world, in the "ahead", such things didn't exist. At least, not so anybody could use them. A cursory glance had told her that; she could see the ruin with her own eyes. They hadn't taken very good care of their world. They had wasted it all, turned it into black ash and ruin. Well, it was their business, not hers.

She had never been much interested in the relationship between their world and hers. She was content to know that both existed, and that she could go from one to the other and back. And she was the *only* one who knew how. Several times, people from this world, members of this group, had tried

to go "back there" with her. It had always failed. As she made the transition, they were left behind. It was her power, her faculty. Not a shared faculty—she was glad of that. And for a person in business, quite a valuable faculty.

"All right," she said crisply. Standing where she could keep her eye on them, she began checking off each box as it was carried from the truck. Her routine was exact and certain; it was a part of her life. As long as she could remember she had transacted business in a distinct way. Her father had taught her how to live in a business world; she had learned his stern principles and rules. She was following them now.

Flannery and Patricia Shelby stood together at one side; Flannery held the money, payment for the delivery. "Well," he said, under his breath, "now we can tell her to go leap in the river."

"Are you sure?" Pat asked nervously.

"The last load's here." Flannery grinned starkly and ran a trembling hand through his thinning black hair. "Now we can get rolling. With this stuff, the ship's crammed to the gills. We may even have to sit down and eat some of that *now*." He indicated a bulging paste-board carton of groceries. "Bacon, eggs, milk, real coffee. Maybe we won't shove it in deep-freeze. Maybe we ought to have a last-meal-before-the-flight orgy."

Wistfully, Pat said, "It would be nice. It's been a long time since we've had food like that."

Master-son strode over. "Let's kill her and boil her in a big kettle. Skinny old witch—she might make

good soup."

"In the oven," Flannery corrected. "Some gingerbread, to take along with us."

"I wish you wouldn't talk like that," Pat said apprehensively. "She's so—well, maybe she is a witch. I mean, maybe that's what witches were . . . old women with strange talents. Like her—being able to pass through time."

"Damn lucky for us," Masterson said briefly.

"But she doesn't understand it. Does she? Does she know what she's doing? That she could save us all this by sharing her ability." Does she know what's happened to our world?

Flannery considered. "Probably she doesn't know—or care. A mind like hers, business and profit—getting exorbitant rates from us, selling this stuff to us at an incredible premium. And the joke is that money's worth nothing to us. If she could see, she'd know that. It's just paper, in this world. But she's caught in a narrow little routine. Business, profit." He shook his head. "A mind like that, a warped, miserable flea-sized mind . . . and *she* has that unique talent."

"But she can *see*," Pat persisted. "She can see the ash, the ruin. How can she not know?"

Flannery shrugged. "She probably doesn't connect it with her own life. After all, she'll be dead in a couple of years . . . she won't see the war in her real time. She'll only see it this way, as a region into which she can travel. A sort of travelogue of strange lands. She can enter and leave—but we're stuck. It must give you a damn fine sense of security to be able to walk

out of one world, into another. God, what I'd give to be able to go back with her."

"It's been tried," Masterson pointed out. "That lizard-head Tellman tried it. And he came walking *back*, covered with ash. He said the truck faded out."

"Of course it did," Flannery said mildly. "She drove it back to Walnut Creek. Back to 1955."

The unloading had been completed. The members of the colony were toiling up the slope, lugging the cartons to the check-area beneath the ship. Mrs. Berthelson strode over to Flannery, accompanied by Professor Crowley.

"Here's the inventory," she said briskly. "A few items couldn't be found. You know, I don't stock all that in my store. I have to send out for most of it."

"We know," Flannery said, coldly amused. It would be interesting to see a country store that stocked binocular microscopes, turret lathes, frozen packs of anti-biotics, high-frequency radio transmitters, advanced text books in all fields.

"So that's why I have to charge you a little dearer," the old woman continued, the inflexible routine of squeeze. "On items I bring in—" She examined her inventory, then returned the ten-page typewritten list that Crowley had given her on the previous visit. "Some of these weren't available. I marked them back order. That bunch of metals from those laboratories back East—they said maybe later." A cunning look slid over the ancient gray eyes. "And they'll be very expensive."

"It doesn't matter," Flannery said, handing her the money. "You can cancel all the back orders."

At first her face showed nothing. Only a vague inability to understand.

"No more shipments," Crowley explained. A certain tension faded from them; for the first time, they weren't afraid of her. The old relationship had ended. They weren't dependent on the rusty red truck. They had their shipment; they were ready to leave.

"We're taking off," Flannery said, grinning starkly. "We're full up."

Comprehension came. "But I placed orders for those things." Her voice was thin, bleak. Without emotion. "They'll be shipped to me. I'll have to pay for them."

"Well," Flannery said softly, "isn't that too damn bad."

Crowley shot him a warning glance. "Sorry," he said to the old woman. "We can't stick around—this place is getting hot. We've got to take off."

On the withered face, dismay turned to growing wrath. "You ordered those things! You *have* to take them!" Her shrill voice rose to a screech of fury. "What am I supposed to do with them?"

As Flannery framed his bitter answer, Pat Shelby intervened. "Mrs. Berthelson," she said quietly, "you've done a lot for us, even if you wouldn't help us through the hole into your time. And we're very grateful. If it wasn't for you, we couldn't have got together enough supplies. But we really have to go." She reached out her hand to touch the frail shoulder, but the old woman jerked furiously away. "I mean," Pat finished awkwardly, "we can't stay any longer, whether we want to or not. Do you

see all that black ash? It's radioactive, and more of it sifts down all the time. The toxic level is rising—if we stay any longer it'll start destroying us."

Mrs. Edna Berthelson stood clutching her inventory list. There was an expression on her face that none of the group had ever seen before. The violent spasm of wrath had vanished; now a cold, chill glaze lay over the aged features. Her eyes were like gray rocks, utterly without feeling.

Flannery wasn't impressed. "Here's your loot," he said, thrusting out the handful of bills. "What the hell." He turned to Crowley. "Let's toss in the rest. Let's stuff it down her goddamn throat."

"Shut up," Crowley snapped.

Flannery sank resentfully back. "Who are you talking to?"

"Enough's enough." Crowley, worried and tense, tried to speak to the old woman. "My God, you can't expect us to stay around here forever, can you?"

There was no response. Abruptly, the old woman turned and strode silently back to her truck.

Masterson and Crowley looked uneasily at each other. "She sure is mad," Masterson said apprehensively.

Tellman hurried up, glanced at the old woman getting into her truck, and then bent down to root around in one of the cartons of groceries. Childish greed flushed across his thin face. "Look," he gasped. "Coffee—fifteen pounds of it. Can we open some? Can we get one tin open, to celebrate?"

"Sure," Crowley said tonelessly, his eyes on the truck. With a muffled roar, the truck turned in a

wide arc and rumbled off down the crude platform, toward the ash. It rolled off into the ash, slithered for a short distance, and then faded out. Only the bleak, sun-swept plain of darkness remained.

"Coffee!" Tellman shouted gleefully. He tossed the bright metal can high in the air and clumsily caught it again. "A celebration! Our last night—last meal on Earth!"

IT WAS true.

As the red pick-up truck jogged metallically along the road, Mrs. Berthelson scanned "ahead" and saw that the men were telling the truth. Her thin lips writhed; in her mouth an acid taste of bile rose. She had taken it for granted that they would continue to buy—there was no competition, no other source of supply. But they were leaving. And when they left, there would be no more market.

She would never find a market that satisfactory. It was a perfect market; the group was a perfect customer. In the locked box at the back of the store, hidden down under the reserve sacks of grain, was almost two hundred and fifty thousand dollars. A fortune, taken in over the months, received from the imprisoned colony as it toiled to construct its ship.

And *she* had made it possible. She was responsible for letting them get away after all. Because of her short-sightedness, they were able to escape. She hadn't used her head.

As she drove back to town she meditated calmly, rationally. It

was totally because of her: she was the only one who had possessed the power to bring them their supplies. Without her, they were helpless.

Hopefully, she cast about, looking this way and that, peering with her deep inner sense, into the various "aheads". There was more than one, of course. The "aheads" lay like a pattern of squares, an intricate web of worlds into which she could step, if she cared. But all were empty of what she wanted.

All showed bleak plains of black ash, devoid of human habitation. What she wanted was lacking: they were each without customers.

The pattern of "aheads" was complex. Sequences were connected like beads on a string; there were chains of "aheads" which formed interwoven links. One step led to the next . . . but not to alternate chains.

Carefully, with great precision, she began the job of searching through each of the chains. There were many of them . . . a virtual infinity of possible "aheads". And it was her power to select; she had stepped into that one, the particular chain in which the huddled colony had labored to construct its ship. She had, by entering it, made it manifest. Frozen it into reality. Dredged it up from among the many, from among the multitude of possibilities.

Now she needed to dredge another. That particular "ahead" had proven unsatisfactory. The market had petered out.

The truck was entering the pleasant town of Walnut Creek, passing bright stores and houses and supermarkets, before she located it. There were so many, and

her mind was old . . . but now she had picked it out. And as soon as she found it, she knew it was the one. Her innate business instinct certified it; the particular "ahead" clicked.

Of the possibilities, this one was unique. The ship was well-built, and thoroughly tested. In "ahead" after "ahead" the ship rose, hesitated as automatic machinery locked, and then burst from the jacket of atmosphere, toward the morning star. In a few "aheads", wasted sequences of failure, the ship exploded into white-hot fragments. Those, she ignored; she saw no advantage in that.

In a few "aheads" the ship failed to take off at all. The turbines lashed; exhaust poured out . . . and the ship remained as it was. But then the men scampered out and began going over the turbines, searching for the faulty parts. So nothing was gained. In later segments along the chain, in subsequent links, the damage was repaired, and the take-off was satisfactorily completed.

But one chain was correct. Each element, each link, developed perfectly. The pressure-locks closed, and the ship was sealed. The turbines fired, and the ship, with a shudder, rose from the plain of black ash. Three miles up, the rear jets tore loose. The ship floundered, dropped in a screaming dive, and plunged back toward the Earth. Emergency landing jets, designed for Venus, were frantically thrown on. The ship slowed, hovered for an agonizing instant, and then crashed into the heap of rubble that had been Mount Diablo. There the remains of the ship lay, twisted metal

sheets, smoking in the dismal silence.

From the ship the men emerged, shaken and mute, to inspect the damage. To begin the miserable, futile task all over again. Collecting supplies, patching the rocket up . . . the old woman smiled to herself.

That was what she wanted. That would do perfectly. And all she had to do—such a little thing—was select that sequence when she made her next trip. When she took her little business trip, the following Saturday.

CROWLEY lay half buried in the black ash, pawing feebly at a deep gash in his cheek. A broken tooth throbbed. A thick ooze of blood dripped into his mouth, the hot salty taste of his own body-fluids leaking helplessly out. He tried to move his leg, but there was no sensation. Broken. His mind was too dazed, too bewildered with despair, to comprehend.

Somewhere in the half-darkness, Flannery stirred. A woman groaned; scattered among the rocks and buckled sections of the ship lay the injured and dying. An upright shape rose, stumbled, and pitched over. An artificial light flickered. It was Tellman, making his way clumsily over the tattered remains of their world. He gaped foolishly at Crowley; his glasses hung from one ear and part of his lower jaw was missing. Abruptly he collapsed face-forward into a smoking mound of supplies. His skinny body twitched aimlessly.

Crowley managed to pull himself to his knees. Masterson was

bending over him, saying something again and again.

"I'm all right," Crowley rasped.

"We're down. Wrecked."

"I know."

On Masterson's shattered face glittered the first stirrings of hysteria. "Do you think—"

"No," Crowley muttered. "It isn't possible."

Masterson began to giggle. Tears streaked the grime of his cheeks; drops of thick moisture dripped down his neck into his charred

collar. "She did it. She fixed us. She wants us to stay here."

"No," Crowley repeated. He shut out the thought. It couldn't be. It just couldn't. "We'll get away," he said. "We'll assemble the remains—start over."

"She'll be back," Masterson quavered. "She knows we'll be here waiting for her. Customers!"

"No," Crowley said. He didn't believe it; he made himself not believe it. "We'll get away. We've got to get away!" ● ● ●

WORTH CITING

Millions of families in undeveloped areas may soon be enjoying a better standard of living because of a new solar stove which is now being developed and tested. Experts hail it as a new economic force, since the use of vegetation and animal dung as fuel, which is prevalent in many of these areas, has caused soil erosion, deforestation and cut productivity of the soil by at least one-half.

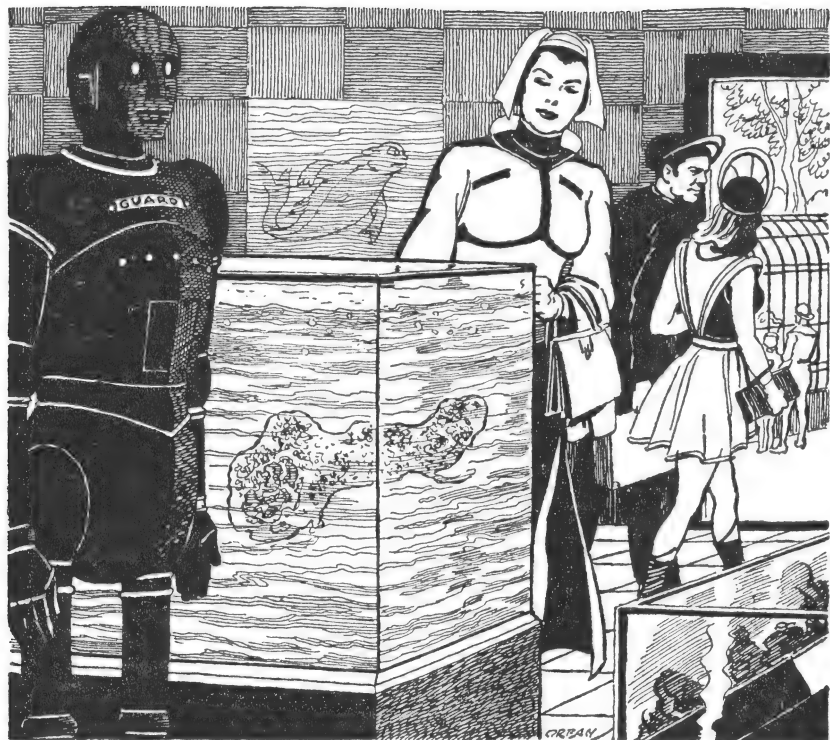
Although the idea of a solar cooker is not a new one, this latest entry is far more practical than most of the others for several reasons. The cooker eliminates the use of parabolic reflectors which are very expensive, and has the advantage of retaining heat for an hour or more after the sun has set. Preliminary models have developed temperatures of 300 degrees F. on days when the outdoor temperature was less than 70 degrees, and have also produced heat sufficient for cooking on comparatively cloudy days. Researchers believe that the solar stove will probably sell for as little as \$5.00 when it is mass produced, a price that is within the financial grasp of about 100,000,000 potential users in India alone.

Our citation this month goes to Dr. Maria Telkes, of New York University, the inventor of the solar cooker; and to the Ford Foundation whose grant made the research program possible—so that sunshine "fuel" will be available to millions of people where stoves and even the cheapest fuels are often too expensive.

What Is Your Science I. Q.?

YOU DON'T have to be an astronomer to tackle this quiz—but it would sure help! Count five for each correct answer, and consider yourself good if you get 60; excellent at 75; and an *expert* if you hit 85 or more! Answers on page 118.

1. Which star is considered the only truly garnet colored star visible to the naked eye?
2. Due to the Earth's daily rotation, a fixed object at the equator moves with a speed of about _____ miles per hour.
3. How many times in a Martian day does the moon Phobos rise and set?
4. Castor the companion star of Pollux is not a single star, but actually a cluster of _____ stars.
5. Triton is one of the moons of Neptune; what is the name of the other moon?
6. If a star appears in the red shift on the spectroscope we know it is moving _____ Earth.
7. How many of the planets are larger than Earth?
8. Pluto is approximately _____ million miles from the sun.
9. What is the name used by astronomers when referring to the sun's apparent path?
10. The gaseous layer above the photosphere of the sun is called the _____.
11. What is the name given to the point from which meteor showers apparently come?
12. When Mercury is on the other other side of the sun from Earth it is _____ million miles away from us.
13. What is the approximate magnitude of Pluto?
14. The Rift is a dark _____ in the constellation Cygnus.
15. Which star is the brightest short-period variable?
16. Densely compressed matter that weighs many tons to the cubic inch is the characteristic of _____ stars.
17. We know that Pluto has no atmosphere; what other planet has none that we know of?
18. What is the name of the American woman astronomer who discovered the use of cepheid variables as measuring sticks of a star's distance?
19. The temperature on the sun's surface is about _____ degrees Fahrenheit.
20. Messier 36, 37, and 38 are open star clusters in the constellation _____.



*Being a world unto one's self is lonely. Even the
poor amoeba creature from Venus knew that . . .*

ESCAPE MECHANISM

BY CHARLES E. FRITCH

Illustrated by Paul Orban

SHE FOUND herself floating again in that strange half-familiar world of murky fluid where only she existed. The liquid was all around her, pressing gently on all sides with a force that cushioned but did not restrain. It was a pleasant sensation, a calming one; the cares of the outside world were non-existent and therefore meaningless.

She drifted, unhampered by the fluid. There seemed to be no direction but outward. Her thoughts went out and they returned with impressions.

This was her world and she was the center of it. It pleased her to think this. It was an alien pleasure that was mental and without physical counterpart.

There was quiet, stillness, a peace she had never known. The fluid flowed about her like a great silent sea that held no sound, no movement.

It seemed natural that she should be here.

She was content.

At the accustomed time, the auto-hypnotics in Miss Abby Martin's body forced her to the threshold of consciousness and cleared her brain of the fog of sleep. Slowly, she opened her eyes to the morning brightness of her bedroom and stared at the vacant skylight and the blue expanse of sky beyond it, not quite comprehending where she was. The cloudfoam cushions of her bed gave credence to the floating sensation she had had during her dream, and for a few seconds she lacked orientation.

Then her eyes wandered about the room, to the closed door of the

raybath stall, the retracted dressing table, the chronometer label that told her it was March 14, 2123 at thirty seconds past 0700 hours. The subtle intonation of her favorite music, Czerdon's "Maze of Crystal" murmured softly from the walls.

Awareness came then, and she lay back on the bed and tried to follow the intricate crystal melodies. But a frown ridged her brow, and she wondered at the strange dream instead. She had found it pleasant enough, for she rather enjoyed the languid floating sensation, the feeling of being self-sufficient, a world unto herself. Yet the very fact of the dream's existence in a world where such things were manufactured disturbed her, for she had taken no dream-pills the night before, nor at any of the other times the dream had come. The incident made her almost wish that witchdoctor psychiatrics had not been outlawed twenty years ago, so she might get some inkling of the dream's meaning; but psychiatrists had been pulled forcibly from the web of society when mental rearrangements were put under the jurisdiction of the Somaticists.

Overhead, a rocket thundered, shaking the house with a gentle hand, and Abby turned her attention to the sound, momentarily forgetting the dream. Through the one-way skylight, she saw a speck of light accelerate beyond vision. She shook her head impatiently.

Rush, rush, rush—that was all people seemed to think about these days. Go to the Moon, go to Mars, go to Venus. In time they might go to the outer planets and perhaps even try to reach the stars. As though they didn't have enough

trouble right here on Earth! All they did, it seemed, was hunt down poor beasts from the various planets and bring them back to Earth to put in cages and tanks on display, ostensibly to "learn more of the planets by studying their inhabitants." To Abby, it seemed cruel and unnecessary.

Like that poor amoeba creature from Venus, she thought, remembering the day last week when she and her niece Linda had visited the zoo to see this latest acquisition. It was a creature captured from the giant oceans of the second planet, a giant amoeba encased in a large transparent tank of murky fluid for paying visitors to see. The creature was supposed to be primitively telepathic, but it seemed harmless enough. Abby found herself sympathizing with it, and it seemed to her at the time that the creature felt this sympathy and was grateful for it. For a brief moment she even had fancied that the Venusian's mind had reached out to her, probing with gentle fingers of thought.

She shook her head at that. Here in the calm clear light of day diffused through the one-way skylight, the anthropomorphic notion was ridiculous; and she mentally chided herself for contemplating such things.

"I must be getting old," she told herself aloud.

In the next thought, she reminded herself that thirty-nine years was not old at all, and in the thought that followed, scolded herself for bothering to defend a statement so obviously rhetorical.

The chronometer ticked silently to 0701, and sighing, Abby rose

from the bed and slipped from the translucent one-piece pajamas to stand nude in the center of the bedroom. At a sudden thought she glanced quickly about the room, for she had the strange uncomfortable feeling that someone was watching her. It was impossible, of course, but she felt ill-at-ease just the same, and a blush of embarrassment stole over her at the thought. The feeling of shameful nakedness persisted even in the raybath stall, and it was a relief to dress and hurry downstairs, routing the unaccountable ideas from her mind.

As usual, Gretchen had busily cleaned the house during the night, silently raying germs and dirt out of existence, and had a warm steaming breakfast-for-two ready by the time Abby had descended the escalator to the dining room.

"Good morning, Gretchen," Abby said.

"Good morning, Ma'm," Gretchen's mechanical voice agreed tonelessly. The robot-maid continued monotonously, "The day will be clear and sunny, with a high of 79 degrees Fahrenheit by 1300 hours—"

"That will be all, Gretchen," Abby interrupted sternly, not interested in facts of temperature and humidity given so mercilessly.

"Yes, Ma'm," Gretchen said obligingly. She turned and went to her closet until she would be needed again.

Abby watched her disappear around a corner and frowned. Sometimes, she thought, the mechanical age could be too mechanical. A simple good morning—

"Good morning, Aunt Abby," Linda said, bounding into sight.

"Good morning, Linda," Abby replied, smiling at the girl's energy. It reminded her of when she was seventeen. "Don't rush your breakfast, dear, you've plenty of time to get to school."

"Yes, Aunt Abby," Linda said, rushing her breakfast. "We're going on a field trip today," she volunteered between gulps of milk. "To the zoo to see the amoebaman from Venus."

Abby smiled. "Amoebaman?" she questioned. "Couldn't it just as easily be an amoebawoman?"

"Amoebas don't have sex differences," Linda said matter-of-factly. "We just call it an amoebaman as a sort of classification because it seems intelligent."

She finished her meal and dashed across the room. "See you later, Aunt Abby." The door whirled open and shut.

Abby went to the window to watch her, sorry she had brought up the subject of sex classification; yet the question had started out harmlessly enough. . . . Waiting outside, a boy stood on an island among moving metal sidewalks. Abby recognized him as one who had visited Linda very often on questions of homework. At Linda's approach his eyes took new life, and he laughed a greeting. Together, they stepped onto a sidewalk and slowly wound from sight, their hands interlocked. Abby shook her head disapprovingly; this would have to be discouraged. Linda was much too young to have boyfriends. She shook her head. The younger generation never seemed to move slowly—they rushed their lives away.

THAT afternoon, Abby sat at the broad one-way windows and watched the cars and airbabs zooming overhead like frightened hornets. Suddenly, she wondered where Dr. Gower was these days. Generally he televised her once in a while or dropped in to chat occasionally, and it pleased her that he did. He was her only male companion these days.

That's the way with men, she thought bitterly, nodding to herself, as you grow old, they lose interest in you. Love cannot be founded on a physical basis.

The thought of physical intimacy disturbed her, and she thrust it aside. One thing was certain, above all else: she was determined to protect Linda to the best of her ability, even as she had protected herself.

"Thank goodness for Linda," she thought. "If it weren't for her. . ."

She let the thought hang uncontemplated, for she *did* have Linda; and she had no wish to dwell upon the memory of her brother's accidental death in an aircab crash which had brought Linda into her custody.

She returned her attention to the world outside her window and found nothing there to interest her. Restlessly, she played with the button-controls on the chair's underarm, causing the walls to spring into the simulated life of a three-dimensional telecast. A program called "Old-Time Commercial" was in progress. Abby, like most people, enjoyed this one, laughing at the exaggerated claims and the tuneless melodies which had been foisted upon her ancestors during

the years before commercials had been outlawed, and she was disappointed to see it fade for channel identification. It was followed by a program of the latest fashions, some of which were much too brazen for Abby to contemplate without squirming, so she changed stations again with a flick of her forefinger beneath the armrest.

"... direct from the oceans of Venus," a man's voice announced enthusiastically, and Abby found herself staring at the amoeba-like creature she had seen a week earlier at the zoo.

"... believed to be directly related to our own Earth amoeba," the man continued, "except, of course, this one is far from microscopic, being larger than a man. For communication purposes, these Venusian creatures seem to use a form of telepathy. . ."

Abby mused upon what Linda had said concerning the amoeba's sex, or rather lack of it. She knew that the creatures reproduced by dividing themselves, but she wondered if reproduction came instinctively or by determination. Either way, the method was to be admired, she felt. It was a pity humans were so complicated. An image stirred deep within her, a fragment of some forgotten memory, but Abby did not notice it.

The creature from Venus moved restlessly across the three dimensional screen, extending itself. It seemed to be regarding her with an intense sort of curiosity, as though it were reaching out, enveloping her. . .

Sunlight spilling through the window, spread a warm languorous pool about her, and she felt pleas-

antly drowsy. She closed her eyes. After awhile, her head tilted, and the rushing world faded as though it had never been.

She floated, placidly content. She seemed, suddenly, to possess a million eyes that probed about in all directions at once. Her body stretched, elongating itself, and moved forward through a translucent fluid to an invisible wall, beyond which stood shadowy figures. She focused her mind upon these figures, and they became clear.

There was a little boy gazing at her in awe, his nose pressed against the glass in fascination, not certain if he should be frightened or not. Mentally, she smiled to herself and directed her thoughts to the boy, telling him not to be afraid. There were several children there, and Abby turned her attention to another.

It was Linda! Linda staring with wide, curious eyes. And next to her a man. Dr. Gower. Her heart leaped—

And she awoke with the warm sunlight streaming in upon her, her heart pounding unaccountably. She looked around. She was still in her front room before the windows. The television was going, presenting the newscast that followed the zoo program.

It was just a dream, but it had seemed so real that it still disturbed her minutes after she was fully awake. For awhile, she was not even certain that the dream had not been real and that this now was not really a dream, that reality and dreaming had not somehow suddenly changed places.

Abby was still sitting at the win-

CHARLES E. FRITCH

dow when Linda came home from school. She watched as Linda and the boy came down the moving sidewalk and stepped off on the island before the house. They stood talking for a moment, then Linda rushed up the walk. The door whirled open and shut, and Linda instead of looking for Abby as was her habit, went straight to the escalator.

Abby called, "Linda!"

The girl paused. "I—I'll be back down."

"I'd like to see you right now, please," Abby's tone, though not hostile, was unrefusable.

Linda appeared hesitantly in the doorway, hands behind her.

Abby smiled pleasantly. "Who was that boy, dear? I don't think I know him."

"Jimmy Stone," Linda said, excitement creeping into her voice. "He lives over in Sector Five, and he's in my history class at school."

Abby recognized the symptoms and frowned mentally at the diagnosis. "He's probably a very nice young man, but—"

"He is, he's very nice," Linda agreed quickly. "He's going to be an astronautical engineer. Look what he made me in plastics class."

She drew her hands from behind her and held a scarlet rose cupped in them. It looked soft, as smooth as though it had been just plucked, as though it held a fragrance that was not artificial.

"It's very nice," Abby admitted, but she wondered how in this age of intense specialization a future astronautical engineer had managed to enroll in a plastics class to waste his time making pseudo-roses. Despite her wish to the con-

trary, she found herself briefly admiring the youngster, then told herself it was a case of puppy love that had inspired the frivolity. "But don't you think you're a little young to be thinking about boys?"

"No," Linda said defensively, pouting. "I like Jimmy and he likes me. I don't see why we shouldn't see each other."

"You're in the same class," Abby pointed out; "that should be enough. After all, you're only seventeen."

"Yes," Linda flared in annoyance, and rushed on in a sudden torrent, "then I'll be eighteen and then nineteen and then twenty and then thirty. If I wait long enough maybe I'll let life pass me by, like—" She paused, eyes wide and regretful at what she was about to say.

Abby smiled gently, but a cold chill gripped her. "Like me?" she said. "You're afraid of being an old maid like me, is that it?"

She hated to use the expression "old maid," but she knew that was what many people called her. She minded the name more than she admitted even to herself, for the words held an unpleasantness, a loneliness she didn't feel—very often anyway. But then she had Linda for company.

Linda's features softened. "I'm sorry, Aunt Abby," she said quietly.

"That's all right, child, I understand how you feel," Abby said. "Now, you go along up and take a shower and get yourself ready for supper, and maybe we'll talk about it later."

Linda nodded soberly and turned away.

Abby sat in the silence of the

room, listening to the soft whisper of the escalator. It hurt her to think that Linda wasn't going to show her the plastic rose at first. You had to be firm in these matters, though, to prevent worse trouble. If care weren't taken, Linda might rush off and be married before she was ready. This was a difficult time for the poor thing, that was certain, but she'd get over it. The little things in a child's life always seemed more important than they really were; that's why there were older people to guide them.

Her own mother had been very strict, and Abby saw no reason to regret it. If it hadn't been for that, she might have married the first boy she'd met. She tried to recall him, but somehow she couldn't, and only a vague image came to mind. It disturbed her to have that blank spot in her memory, but Somatic drugs had consistently failed to fill it in.

Linda came in a few minutes later, freshly scrubbed but not convinced.

"All ready, dear?" Abby said pleasantly.

She got up and put a consoling arm about the young girl. Together they went into the dining room, where Gretchen had silently placed the appropriate food a few minutes before.

THEY ATE in silence, with only the sounds of eating and an occasional whir from the robot-maid as she appeared and disappeared with dishes. Linda was moody, thoughtful.

"How was the field trip, dear?" Abby wondered.

"All right," Linda answered. "The Venusian amoeba is very much like our own, the man said. It even reproduces itself by division."

"Isn't that nice," Abby said, just a bit hesitantly, uncertain that reproduction by any means should be discussed. However, if they taught it in school—

"I feel sorry for it," Linda said.

Abby stared at her.

"Having no one to love," Linda went on, a faraway look on her face, "no one to love it. If it has any feelings, it must be very lonely."

Abby made an irritable stab at a piece of synthetic potato on her plate. "Nonsense," she snapped. "You're talking like a silly school-girl."

On second thought, she decided that Linda *was* a silly schoolgirl and would naturally talk like one; she was still a little girl, dependent for protection upon her Aunt Abby. That thought gave her some measure of comfort.

"I feel like an amoeba sometimes," Linda said, poking restlessly at a piece of meat on her plate.

"Sometimes I wish you were, dear," Abby said, feeling strangely annoyed by the statement. "Now, eat your steak before it gets cold."

"Don't you ever get lonely, Aunt Abby," Linda asked. "Suppose Dr. Gower went away, wouldn't you be lonely?"

"Dr. Gower is not going away," Abby pointed out.

"He might," Linda insisted. "You haven't seen him for three days now. He might be gone already."

Despite herself, Abby felt sudden panic. "He's probably busy. Doc-

tors are busy these days."

"He could have called."

"Linda, eat your supper," Abby said sternly, "and stop this nonsense. Besides, what difference would it make. One person doesn't make the world begin or end. Dr. Gower and I are good friends, but we must adjust to these things. If he is gone away, he's gone, and that's all there is to it!"

She tried to make her voice sound calm, but there was a sinking feeling in her stomach, and a small questioning voice in the back of her mind kept asking did he? did he? did he? Furiously, she thrust the thought aside.

"I saw him at the zoo today," Linda said.

"You did?" Abby said, relieved, and then she thought of her dream of the zoo and of Linda standing there and Dr. Gower beside the girl. Could she be psychic? No, there was a simpler explanation. "I saw you both there," she went on, smiling, "on television this afternoon."

Linda frowned. "But Dr. Gower didn't arrive until the program was over, Aunt Abby."

"I saw you," Abby insisted.

"But I'm certain of it."

"You must be mistaken, dear," Abby said in a tone of finality. And that settled that.

The doorbuzzer sounded, and Gretchen whirled to answer it. Abby pressed a button beneath the table, and the image of Dr. Gower appeared on a small screen set invisibly in the opposite wall. She could feel her blood accelerate at the sight of him, but she wondered why he looked disturbed.

She rose. "I'm going in to see Dr.

Gower, dear," she told Linda.

"Now, don't rush your food."

Linda nodded abstractedly. She wasn't in a rushing mood.

"Abby, how are you?" Dr. Gower said warmly, at her approach.

"Very well, thank you, Tom," Abby said. "I thought I might have to get sick to see you."

"I was busy," he explained. "The colonization of space brings up a great many new medical problems. How's Linda?"

"Fine. I'm afraid, she's beginning to have a slight case of puppy love; I'm sure it can be discouraged in time, though."

Dr. Gower hesitated. Then he said, "Linda's a normal young girl, Abby. You can't stifle her natural desires forever."

"I not only can, but I will." To cushion the harshness of the statement, she added, "At least until she's mature enough to decide these things for herself. She's still a child."

"A great many women get married at eighteen," Dr. Gower pointed out. "Physically, it's a good age for marriage, and a psychology going against the physical grain isn't going to help."

"There are such things in life, Dr. Gower," Abby said a bit coldly, "as moral considerations. We're not animals, you know."

"It might help sometimes," Dr. Gower mused, "if there were a little more animal in us and a little less so-called human."

Abby found her enthusiasm for seeing Dr. Gower ebbing, being replaced by what she considered a justified annoyance. Dr. Gower knew her feeling about Linda. Something seemed to have changed

his tactics. She did not like the change.

"If you don't mind," she said, "I'd like to bring up Linda in my own way. The courts made me legal guardian of Linda until she's twenty-one, and I intend to protect her until then to the best of my ability."

"By that time, you'll have her so confused about the world she'll be defenseless against it. I never said anything before, Abby—"

"And now is a poor time to start!" Abby's voice was like ice. "I'm sorry, Dr. Gower, but if you persist in talking this way, I'll have to ask you to leave. Linda is in my charge, and I won't stand for interference, even from you."

The doctor's shoulders slumped dejectedly. "Do you know why you were chosen guardian, Abby," he said slowly.

"Of course. I was the nearest relative. Why bring that up?"

Dr. Gower shook his head. "Nothing," he said, after awhile. "Nothing at all. I came around to say goodbye, Abby."

Abby wavered, the ice in her melting. "Goodbye?"

"I'm leaving for Venus," he said, "the day after tomorrow. They need doctors up there, and I can probably do more good there than here. Besides, I'd like to investigate these amoeba creatures; I suspect they have more intelligence than we give them credit for."

"I—I'll be sorry to see you leave, Tom."

"I came to ask you to go with me. You know how I feel about you, Abby; I thought I'd try just once more."

"I couldn't leave Linda," Abby

said.

"The standard excuse," he reminded her, his voice more weary than bitter. "What Linda has needed all these years was a father, Abby. You're giving her a warped viewpoint."

"The Somaticists don't think so," Abby flung at him.

He crimsoned. "Somatics aren't the answer. Our era has become so mechanical that people have come to think that pressing a button is going to cure the evils of the world. Pills and pushbuttons are fine in their place, Abby, but they're not the answer, not the complete one anyway. At one time, they thought psychiatry was the answer; they were wrong there, too. The answer's probably a combination of the two."

"I'm not looking for the answer to anything," Abby said wearily. "I just want to be let alone."

Dr. Gower nodded and turned to go.

"Have a nice trip," Abby said, trying to sound cheerful, "I'm sorry we had to argue like this." The thought of his leaving brought a sinking sensation which she tried to thrust off and couldn't. But there was Linda to think of; the girl couldn't go to Venus.

At the door, Dr. Gower hesitated. "I don't know if I should tell you this; it might help, and it might not." He paused again uncertainly and then went on in a decisive tone. "Linda's your own child, Abby."

She looked at him, puzzled. "Of course. The courts—"

Dr. Gower shook his head impatiently. "I don't mean that. I mean Linda was actually born to you."

The words sank in, but Abby found them meaningless. Two and two did not make five no matter how many times you added them. There was a tense silence, but she didn't know what to say to fill it.

"That's what happened in your blank spot, Abby," Dr. Gower went on. "You ran away from home when you were twenty-one, because your mother was too strict, because she acted just like you're acting with Linda. Before she could find you again, someone else had. You were pregnant."

Abby's brow furrowed. "You mean—" the thought completed itself, and a look of horror replaced the frown. "That's a horrible thing to say, even in a lie."

"I wish I were lying," Dr. Gower said earnestly. "You didn't remember anything that had happened, and were still dazed for nearly a year afterward. Your subconscious used amnesia as an escape mechanism, and you forgot the incident, repressed it without realizing it. An escape is sometimes possible only in the mind, where Somaticists are often helpless. I didn't say anything before, but now I'm afraid Linda may be made to suffer if I don't."

Abby stared at him in shocked silence. She said, after awhile. "It's not true, it can't be."

Dr. Gower shrugged. "I'm sorry, Abby, it is. It's not Linda you're worried about, it's yourself; you're afraid to face reality."

"Get out," Abby said slowly, hating him for that. Her voice rose the least bit. "I won't listen to these lies."

"I thought it might help. Say goodbye to Linda for me." The door closed behind him with a click.

Abby stared at the closed door, a small portion of her was calm, the rest chaotic. The calm portion wondered why she should be so disturbed by something so obviously impossible. All these years she'd been wrong about Dr. Gower, trusting him as a friend. For what he said was untrue, of course. It had to be. And yet why couldn't she remember things? It was only eighteen years ago and important things had happened in that year, but somehow her memory bypassed their happening. It was like reading a book with several pages blank; you knew from later pages what had happened, but the actual experience of the events was lost. Could it be—the thought came despite her—could it be that she'd had amnesia, that Dr. Gower had really told her the truth, that someone had actually—

"No. He was lying," she told the room.

"He never lied before," Linda said quietly from the doorway.

"You—heard?"

Linda nodded.

Abby tried to smile. "I'm afraid, dear, that Dr. Gower is like all men. When he couldn't have what he wanted—" her face clouded at the thought—"he tried to shock me, to hurt me, to make me ashamed . . ."

"Would it make you ashamed to have me for a daughter?"

Abby's heart beat quickly. "Of course not, Linda. But the circumstances—"

"I see," Linda said slowly. "They have a name for children like me; that's what you're ashamed of. Or maybe, as Dr. Gower said, you're afraid for yourself!"

"But it's not true, Linda, don't

you see?" Abby insisted.

She put her arm on the girl's shoulder. Linda shook it off; tears welling in her eyes.

"You don't even want to know," the girl accused. "You don't even care." And she turned and ran from the room.

The escalator whispered, and Abby stood in the center of the room looking at the empty doorway. She stood on the brink of a great precipice, balancing precariously, and for a brief moment she found herself believing what Dr. Gower had said. He was a fine man, and good, and he would not lie to her. Things her brother had said came to mind, once-harmless statements that seemed to take on new significance, as though he'd said them to prepare her for this moment. And suddenly, very suddenly, the world was tottering; dazedly, she made her way to a chair and sat limply in it.

Dr. Gower was gone now, and she would never see him again. She knew that, and she knew that despite the things she'd said, that it did matter that he was going. But then she had Linda to think of. Or was it really Linda that concerned her? She could take the girl along, certainly; that would even clear up the problem of Jimmy Stone. Was it really the marriage she feared, a fear based upon some secret mental block in her mind? The doubt returned then, and she wasn't sure. She wasn't sure of anything anymore. Abby had to think. She had to quiet her nerves and the frantic jumbled thoughts that had begun to race through her mind.

She felt dizzy and held a hand to one of the walls to steady herself

as she walked to her bedroom. From the dressing table drawer she took a bottle of dream-pills. The label was fuzzy to her eyes, but the word *Danger* stood out in bold letters. Abby swallowed three of the pills, which was two more than the safe dosage, and lay across the bed, eyes closed. The door to the room closed automatically.

"It's not true," she told herself again, a desperate urgency to her voice. "I've got to get away from these thoughts. Got to get away. Got—to—escape."

She felt drowsy, but the thought of what Dr. Gower had said persisted. It couldn't be true. It couldn't. And yet it might be; it was the possibility that disturbed her. That blank spot. Eighteen years ago. Eighteen years . . .

SHE DRIFTED into a restless sleep. Mentally, she traveled across the familiar plains of her past to that strange dark canyon she couldn't recall. Her mind hovered frightened above the depths, failing to see through its darkness; then she passed to the other side, to her childhood, to when she was a young girl and her mother was alive.

The scene burst upon her with vivid clarity, and she found herself reliving it. It was there, all of it. The home life, protecting and yet restraining. Her dissatisfaction. The secret determination. The running away in the dead of night. It was all there, just as Dr. Gower had said.

"But it's a dream," she murmured, "just a dream."

Yet it seemed a reality. She could

feel the cool night press upon her as she made her way slowly through the strange-familiar darkness and descended into the depths of the canyon. The feeling of having been here before was with her, and it brought terror with it. She walked on, looking to either side, listening fearfully. And then she stopped, her blood becoming ice.

There was a man before her. She could see only his eyes, but they were cruel eyes, savage and lustful.

Knowledge came then, bursting over her in a raging tide. She screamed and ran, her footsteps echoing frantically as she hurried through the darkness, looking for an opening for a protecting light. But no opening appeared, no light came. She ran until she was exhausted, and then she sank to the ground panting trying to still her spasms of breath. There was a small sound, as of the scraping of a shoe and she looked into the eyes again.

She screamed again and again and again not knowing where screams ended and echoes began. She put her hands over her ears and screamed into the darkness. She could feel hands reaching out for her and she shrank away from them.

Her mind was a playground for terror. She had to escape. She had to.

(But sometimes the only escape is in the mind!)

The hands reached out. She was suddenly falling, down, down, down. Calmness came, and a grateful thought appeared: she had escaped. Nothing else mattered; only that . . .

She stopped falling. The mist

grew thick, thicker; it became dense; it became liquid. She could not feel the beating of her heart, but her mind was calm and it looked about with a detachment that was intellectual.

She was floating again, floating silently through a world of murky fluid. The liquid was pressing with a force so gentle it almost did not exist. It enveloped her like a protecting shield.

She drifted. There seemed to be no direction but outward. Her thoughts went out and they returned with impressions. This was her world and she was the center of it. There were no problems here, no encroachments on existence or security. It was like a return to the womb. Womb? she thought. She turned the word over in her mind and found the concept alien. She regarded it intellectually, at leisure.

Time passed silently, without incident, without measurement. It had no meaning, no referent.

Curious after awhile, she went forward, her mind impinging upon shadowy figures behind the transparent barrier. She focussed her attention upon them, and the image cleared.

There was a man there, and a woman, and a girl. She could hear them as they spoke.

"I don't know why you wanted to come here, Abby," the man was saying. "You'll see enough of these creatures on Venus."

"This one is special," the woman said slowly, tasting the words like some unfamiliar food. "It's what made me change my mind about —things. It must be very lonely."

"Bosh," the man scoffed gently. "Intelligent or not, an amoeba

doesn't have feelings of loneliness."

"Doesn't it?" the woman wondered. "Perhaps not at first. But being able to probe the minds of humans and sympathize with them yet not contact them can . . ."

"We'll be late for the rocket, Mother," the girl said. "Jimmy promised he'd be down to see me off and let me know if he can go to the Venus Academy next year."

"All right, Linda, we're going now."

At the door, the woman turned for a last look; her thoughts were thoughts of sorrow, of pity, of—regret, perhaps.

"You'll learn much of the world this way," the thoughts came, "and you'll have time to readjust. Knowledge will pyramid gently, and with it will come wisdom. After awhile, escape won't be necessary. You'll want to return then and be a part of your world. Meanwhile, I must help my own people; this is the best way for both of us to escape."

The woman linked arms with the man and the girl then, and the three of them went out.

Silence returned, bringing with it a troubled wonderment. Then the murky fluid flowed past all vision, and the world returned, safe and familiar. The thoughts returned briefly, as echoes, but they were unfamiliar this time and meaningless.

But it was not always so, and it would not always be, for contemplation bred curiosity, and curiosity bred knowledge, and knowledge bred desire, and desire the ways and means of accomplishment.

Meanwhile, there was quiet, stillness, a peace she had never known. The fluid flowed about her in a silence that held no sound, no movement. It was womb-like, protective.

It seemed natural that she should be here.

For the moment, she was content. ● ● ●

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Prescriptions for A and H- bomb radiation sickness may consist of shots of ground glass, or pulverized limestone or quartz. Tests have shown that such injections saved one-fifth of the animals that would have otherwise died from moderately high doses of radiation all over their bodies. Since the life-saving effect seems due to inflammation from introduction of foreign material, the findings may lead to the discovery of other substances which can be used with even better results.

Farmers of the future may not mind the rocks in the pastures and fields too much—provided the rocks are granite. Recent tests have shown that very finely pulverized granite, when spread on the fields, is an excellent fertilizer which provides potassium to alfalfa and clover. Two of the granite minerals, feldspar and mica, supply the potassium which is one of the three fertilizer elements that is necessary to a great variety of plants.

The shortage of lumber which has been predicted may be alleviated to a large extent in future times by a lumber making robot. British scientists have devised an automatic machine which uses sawmill waste

to turn out strong, continuous, warpless board. Small chips of materials such as fibrous woods, sugar cane waste and even flax sheaves are pushed from a storage hopper into a drier. A film of liquid resin is then applied to the chips to foster adhesion; and then the carpet of chips is dropped on the press. A radio frequency heater starts the second drying process before the board is pressed to final thickness. It emerges from the machine as continuous board at the rate of about twenty feet per minute and is about four feet wide and three-quarters of an inch thick. Only three trained men are required to watch over the completely automatic process, which is designed to serve on a twenty-four hour a day basis.

Airplanes that break the sound barrier may someday be made of no more than laminated glass and plastics. Researchers have come up with a new material which consists of glass cloth and three different plastic resins laminated and bonded together. The finished product can withstand temperatures of five hundred degrees Fahrenheit for eight days or more, and can withstand these high temperatures better than either aluminum or magnesium.

Giant windmills may dot future landscapes as an aid to weather control and smog control. The 150 foot blade on these motor driven fans, swirling 150 feet above the ground, would create artificial thermal updrafts. The device would draw air from a radius of about five miles at a rate of 65 to 95 miles per hour. The result would be a

funnel of fast moving air similar to that found in tornadoes. Changing the angle at which the blades operate, or varying the power of the 500 horse-power motor, would regulate the thermal and create the desired stream of warm air at the place and time it was necessary.

Traffic lights on the highways of tomorrow may be blue and yellow instead of red and green. Color experts have found that red-green blindness is the most prevalent of all color blindness, and that about 2500 traffic deaths a year are caused by this inability to observe the signals properly. The blue-yellow combination would, according to these researchers, be the logical answer, since these two colors are lowest on the scale of color blindness. They predict that though the change-over would be difficult, traffic accidents due to this disability would be cut by one-third to one-half.

Time travel is a favorite science fiction gimmick, and now medical research has come up with a close approximation. A new drug extract taken from a fungus which attacks grain has been tested in Britain, which makes adults feel as though they had shrunk to the size of a child. It also snatches them back through time to relive childhood events with extraordinary clarity. The often long and tedious process

necessary to trace back the causes of mental derangement and adult neurosis is speeded up immeasurably by this "time travel" drug, and psychiatrists are hailing its discovery as a great step forward in the treatment of the mentally ill.

Radar and radio waves may someday prove that the Earth wears an invisible girdle of electricity similar to the visible rings which encircle Saturn. Geophysical research points to the fact that some extra-terrestrial force that exerts its influence on the Earth's restless magnetic field does exist. The band which is thought to circle the Earth's equatorial area 12,000 to 16,000 miles in space may have been built up over the ages by electrical storms and may be the force that keeps the terrestrial magnetic field from returning to normal for several days after a magnetic storm.

First aid kits in homes of the future may one day include a pocket sized resuscitator and anaesthetic machine. The new gadget weighs less than two pounds, including a thumb-sized gas or oxygen cylinder. It has a rubber face mask, a re-breathing bag and, without the cylinders attached, can be held in the palm of one hand. Patients with heart trouble could keep one handy at home or in the office; passengers in planes flying at high altitudes

WHAT IS YOUR SCIENCE I.Q.?

ANSWERS: 1—Mu. 2—1,037. 3—Three. 4—Six. 5—Nereid. 6—Away from. 7—Four. 8—3,675. 9—Ecliptic. 10—Chromosphere. 11—Radiant. 12—136. 13—Fourteen. 14—Nebula. 15—Algol. 16—White dwarf. 17—Mercury. 18—Henrietta Leavitt. 19—10,000. 20—Auriga.

could use them in emergencies; and police and firemen could use them for unexpected births, drowning accidents, mine explosions and fires. In short, this handy new machine could be available at all times for any emergency suffocation which might arise.

A floating heliport which rests on water may be the answer to quick convenient air service from your home town. A test model has been built on a six story office building in Phoenix, Arizona, and consists of an aluminum platform floating in two inches of water. The building has not been reinforced at all, yet the roof shows no signs of caving in. The 11-by-16-foot float distributes the landing shock of the helicopter to the entire roof area covered by diked-in water and so eliminates the pinpoint stresses that have in the past required extensive changes in the very frame of buildings receiving concrete heliports on their roofs. The new installation weighs about 50,000 pounds and would cost about \$5.00 per square foot, and could be installed without reconstruction on any roof already stressed for about 40 pounds per square foot. A concrete landing strip, such as is now used weighs about 50 tons and costs \$22.00 per square foot.

"Fish farming" may someday be an important adjunct to grain and vegetable farming. Recent work with farmland ponds, which have been fertilized with manure and compost and artificial fertilizers, promoting lush vegetable growth in the water, show that vegetation-eating fish thrive. The carnivorous fish

feed on these, and the farmer reaps a fish harvest that often produces more income than that from an acre of land. Salt water fish farms, which use electric currents to trap the "crop" on a mass scale, are the next step in producing enough food to go around.

Buildings comparable in size to two city blocks for use as hangars, storage warehouses and small factories may soon be made entirely by prefabricated methods. A new design, featuring a double cantilever and a space-frame construction principle, can be mass produced for permanent or temporary structures. The units can be folded like an accordion and shipped to the construction site where unskilled labor can lock them into position. Since there are no key structural points

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in the weblike design, bombing it would be like poking a hole in a spider web. Parts damaged by explosion could be replaced quickly without disabling the building while repairs are being made.

Your TV set, ten years from now, may have a picture screen so thin that it can be hung on the wall like a painting. According to predictions by General Electric scientists, the circuits and wiring would be built into the frame and the tubes would be a grid of wiring. Controls

would be located in a small box beside your easy chair, and the model would receive color as well as monochrome pictures. Work is now going on to speed the plotting of aircraft in military filter centers by means of a picture-on-the-wall plotting board which uses electronic computer circuitry techniques to convert signals into an image on the board. This technique, when fully developed, can be carried over to civilian uses and will make possible the predicted TV installation.

A CHAT WITH THE EDITOR

(Continued from page 3)

miles he leaned over several times to look out the window, his face close to mine. He would point at cars and I nodded and told him what makes they were. We passed a small airport and he got quite excited and pressed his face against the window. I explained that they were airplanes and he made motions with his hands that indicated he understood that planes went up and down. When he moved back to his seat there was a big wet spot on the window where his mouth had been.

About twenty miles from New York the old lady took him by the hand and they got off. As the bus moved on, I watched them as they stood by the side of the road. She

was wiping his face with a handkerchief and he was standing child-like there for her, his knees slightly bent, his arms hanging loosely and his face turned up at an odd angle.

I thought about them until the bus pulled into the terminal on Forty-third Street. I couldn't forget the old lady and *her* problem during years past and years to come.

Even that dim, dirty, noisy street outside the terminal looked brighter now, for some reason, and the air was pretty good and the stretch of sky above the tall buildings was a bright blue. Suddenly I recalled the reason for my trip, but it was no longer very important; it was now almost inconsequential.

See what I mean?

—jfq

Science is not the disembodied sort of activity that some people would make out, engaged in the abstract task of pursuing universal truth, but a social function intimately linked up with human history and human destiny.

—Julian Huxley

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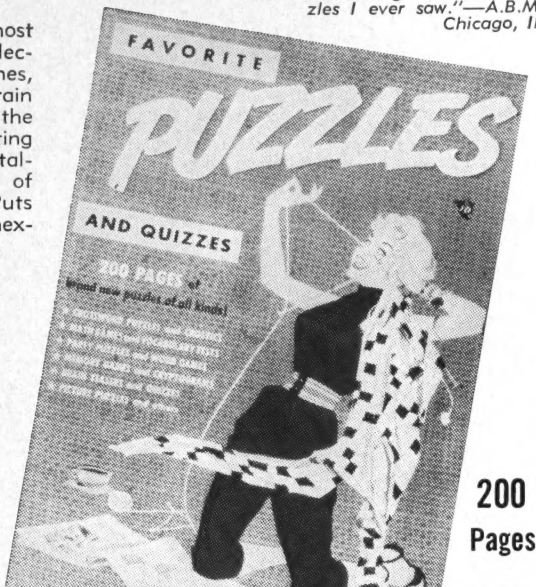
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